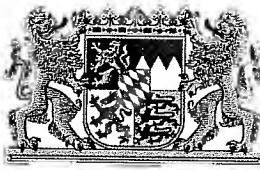


**Brochures and materials of the Bavarian Ministry of Economic Affairs,  
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Development for circulation and distribution purposes**

**FARA LABELING**

<b>1</b>	07/14/09	Solar Technology Flyer: distributed at InterSolar, Trade Fair, San Francisco
<b>2</b>	07/15/09	Executive Breakfast: Invitation to Solar Technology in Bavaria and follow-up letter
<b>3</b>	08/24/09	Mailing of Bavaria's Foreign Trade 2008
<b>4</b>	3 <sup>rd</sup> Quarter 09	3 <sup>rd</sup> Quarter Newsletter: Business Bavaria
<b>5</b>	09/22/09	Newsletter distributed at ION, Savannah, GA;
<b>6</b>	09/15/09	VC Magazin: Biotech-Cluster Bavaria, distr. at BioPharm, San Francisco
<b>7</b>	10/08/09	Invitation: 5th annual Oktoberfest Networking reception
<b>8</b>	4th Quarter 09	4th Quarter Newsletter: Business Bavaria
<b>9</b>	10/19/09	Attended and exhibited at Digital Hollywood, Santa Monica, CA
<b>10</b>	12/09/09	"Happy Holidays" e-mail sent to database contact
<b>11</b>	12/09	Brochure: Life Sciences in Greater Munich Biotech Region

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**Invest  
in Bavaria**

**Cluster  
OffensiveBayern**

## State of Bavaria – Executive Business Breakfast

### “Solar Technology in Bavaria”

#### Program:

**Lucie E. Merkle, Executive Director  
State of Bavaria U.S. Office (West Coast)  
Introduction**

**Constantin Schirmer & Robert Bartl  
Bayern Innovativ GmbH, Nuremberg /  
Cluster Energy Technology  
Bavaria's Energy Technology Sector: Strong Networks**

**Willy Bihler, CEO  
Solarzentrum Allgau  
Energy Technology Made in Bavaria: Combination Module PV  
Therm**

**Wednesday 15<sup>th</sup> July, 2009, 8:00 am – 10:00 am**

**Work Room 3, Floor 3**

**w – Hotel San Francisco  
181 Third Street, San Francisco, CA 94103**

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**Contact:  
Tel: +1 415 362 1001  
Email: [sanfrancisco@bavaria.org](mailto:sanfrancisco@bavaria.org)**

**Please also visit us at the Intersolar North America 2009 at the Bavarian Pavilion:**

**9736 A – West Hall**

**State of Bavaria**

United States Office for Economic Development /  
West Coast Division

July 29, 2009

**State of Bavaria “Executive Business Breakfast”  
W Hotel San Francisco, July 15<sup>th</sup>, 2009**

Thank you for joining our breakfast event at the W Hotel in San Francisco on July 15<sup>th</sup>!

As Dr. Robert Bartl, Bayern Innovativ GmbH/Energy Technology Cluster, pointed out in his keynote, Bavaria belongs to the top regions in Germany regarding Energy Efficiency and Renewable Energy Sources.

To learn more about Bavaria's energy cluster and cooperation opportunities, please visit  
<http://www.invest-in-bavaria.de/en/bavarias-clusters/environment/energy-technologies/>

or check out our online company database “Key Technologies in Bavaria” with free information on products, services, research institutes and Bavarian companies:  
<http://www.bayern-international.de/key-technologies-in-bavaria/en>

Please let us know if you are interested in a copy of the keynotes of Dr. Robert Bartl, Bavarian Energy Technology Cluster, and Mr. Willy Bihler, Solarzentrum Allgau. We are happy to send you a PDF-file.

The State of Bavaria U.S. West Coast Office is your partner for overseas business development, partnering and expansion projects. We offer individual and cost-free assistance in finding a business location and establishing contacts with key partners and industry experts in Bavaria.

If you have any questions please do not hesitate to contact us. We look forward hearing from you.

Sincerely,

Lucie E. Merkle

This material is circulated by the Bavarian Ministry for Economic Affairs, Infrastructure, Transport and Technology Office for Economic Development on behalf of the State of Bavaria, Federal Republic of Germany. Additional Information is on file with the Department of Justice, Washington, D.C.

**State of Bavaria United States Office /  
West Coast Division**

388 Market Street, Suite 1050  
San Francisco, CA 94111  
Phone: +1 (415) 362-1001  
Fax: +1 (415) 362-1030  
E-mail: [sanfrancisco@bavaria.org](mailto:sanfrancisco@bavaria.org)  
Internet: [www.bavaria-westcoast.com](http://www.bavaria-westcoast.com)



Invest  
in Bavaria

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Dear friends and colleagues,

Please find attached the latest copy of our new newsletter

**"Business Bavaria"**

This issue provides you with information and news about Bavaria's economy and business sectors, news on scientific research and groundbreaking developments, as well as touristic information and portraits of outstanding personalities.

The next issue of "Business Bavaria" will be released in October 2009.

If you need specific information or if you have any questions, please don't hesitate to contact us anytime.

We hope you enjoy reading "Business Bavaria".

Best regards,

The State of Bavaria Team

**State of Bavaria United States Office - West Coast Division**

388 Market Street, Suite 1050  
San Francisco, California 94111  
Phone: +1 (415) 362-1001  
Fax: +1 (415) 362-1030  
[sanfrancisco@bavaria.org](mailto:sanfrancisco@bavaria.org)  
[www.invest-in-bavaria.com](http://www.invest-in-bavaria.com)

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## What's inside

- From Bavaria: a chip saving lives and money
- Prudence pays off for Bavaria's profitable financial institutions
- Munich: best infrastructure in Europe, second best in the world
- Bavaria's hottest-in-the world solar power sector
- B & B: in Bavaria, it means bed and biking

### E-Call's 'heart' is an Infineon solution based on the X-Gold 101

Once an accident takes place—something that happens 1.4 million times a year in the EU—a crash sensor sends a signal to the chip's GPS and mobile telephony capabilities. They, in turn, notify the nearest emergency assistance post of the place and time of the accident.

The resultant 40% - 50% cutting of times of response will save both thousands of lives and up to EUR 26 billion a year in medical and other costs, reports the Union.

No more accident victims – of which there well over two million a year in the EU – lying trapped in a car or in a ditch, waiting helplessly and seemingly endlessly for a passerby to call the police.

**Saving money** – in another, very important way. The fingernail-sized X-Gold 101 is not only smaller than today's chips. It also reduces the number of electronic components in a simple mobile phone from over 200 to fewer than 50.

The X-Gold 101 does this by having a GSM baseband, RF transceiver, RAM, camera, mixed signal, power management and other capabilities built into it.

What this means: telephones equipped with the X-Gold 101 or Infineon's related XMM1010 platform are a lot cheaper--around 30%--than today's ones. No wonder that more than 100 million of these ULC (ultra-low costs) 'X' telephones have already been sold in Africa and Asia.

With many more to come. Half of the world's 6.6 billion people have never used a telephone. The 'X' telephones are going to change all that, forecast experts.

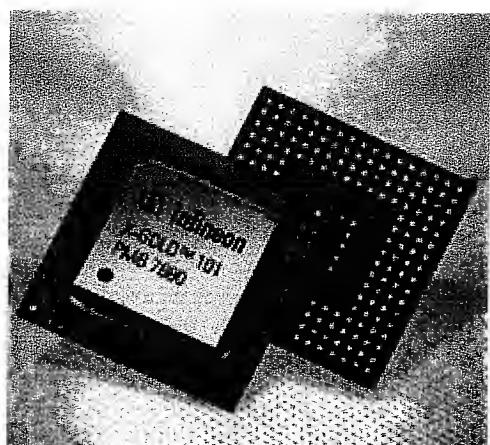
Exciting though these prospects and developments are, these are just the start of the 'killer apps' to ensue from Infineon's X-Gold and the XMM1010 families, reports Stefan Butz, who headed the Munich-headquartered Infineon's team of development.

"Is there any reason why computers, ticket dispensers, navigation systems or even keys to your house can't be equipped with these do-it-all chips?" he asks in an interview appearing in business weekly *WirtschaftsWoche*.

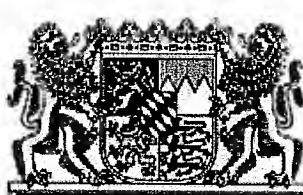
## Saving lives and money Infineon's X-Gold 101 Germany's hottest product

Infineon's X-Gold 101 has won 2009's Prize for Innovation in German Business – the most prestigious award conferred upon high-tech breakthroughs in the country. And for good reason. The chip's technology platform is going to save lives, save money – and create a whole generation of 'killer apps' (killer applications).

**Saving lives** – at least 2,500 a year, reports the European Union. The lives will be saved by E-Call. This 'black box' is set to be SOE (standard operating equipment) by 2012 in all automobiles in the Union.



Source Infineon



## Munich – best infrastructure in Europe, second best in the world

These are the findings of the 2009 Quality of Living study compiled by market researcher Mercer. The study used input from expatriates to rank the world's 215 leading cities.



Evaluated in the all-important infrastructure category were such parameters as reliability of electricity and water supply, quality and sophistication of telecommunications and postal services, extent and frequency of public transportation networks and links, level of stress from traffic, and number of international flights from local airport.

Munich's top-two placement in this category boosted it to a seventh place in the worldwide rankings of quality of life.

<http://www.mercer.com/qualityofliving>

## Prudence and patience pay off: Munich Re shows how to weather financial storms

"A strong year, with an even stronger one to come." Only a very few of the world's major financial service companies got to make that statement about 2008.

One of these very, very few is Munich Re, the world's largest and most successful re-insurer, which in 2008 recorded healthy profits of €1.5 billion and record gross premiums of nearly €38 billion. Own funds—the best indication of corporate solvency—also reached a record level of €21 billion.

And 2009 looks even better for Munich Re, which registered in the first quarter profits of €420 million. This and other results have caused CEO Nicholas vom Bomhard to forecast for the year as a whole further rises in his group's key indicators.

The question arises: what is Munich Re doing differently than other financial services suppliers in general?

**The answers, very simply, are 'prudence' and 'patience'.**

"We refrained from entering certain areas of business. Just because the music is playing loudly doesn't mean that you have to dance. We always remained aware that higher rates of return inevitably mean higher risks," stated vom Bomhard in a recent interview in weekly *Der Spiegel*.

In the interview, vom Bomhard detailed the barrage of criticism showered upon these policies of avoiding risks—"boring!" and "too conservative".

As he explains, the keystone of these policies is rewarding managers for long-term and sustainable achievements, and not for racking up great quarterly results by entering into high-yield, highly dangerous transactions. As vom Bomhard notes, these policies are motivated by the "great sense of the long-term responsibilities we have for the well-being of our policyholders, our staff members and our other stakeholders".

Vom Bomhard's sense of responsibility extends to the well-being of environment.

The strength of his commitment to first finding and then implementing ways of saving the climate won him in 2007 Germany's "Eco-manager of the year" award. This is conferred by the World Wildlife Fund and business magazine Capital.

### State-wide solvency

These policies of prudence and patience have been also been employed by a large number of other state financial institutions - with similar and positive results.

One of them: Stadtsparkasse München (SSKM). Munich's municipal savings bank registered a sterling year in 2008, with all indicators at record or near-record levels – including amount of new credit supplied and net deposits.

As SSKM CEO Harald Strötgen explains, his bank's successes stem from sticking to what it knows and does best: serving Munich's booming economy and the companies and consumers comprising it.

"We know our companies and we know our private customers. So we know which services to supply them with, and how much to give them," he concludes.

Such practices are the norm at Bavaria's 74 other savings banks, and at the state's 317 credit unions. And because they are, nearly all of these financial institutions also had good to excellent years in 2008.

## The youngest for the biggest Karl-Theodor zu Guttenberg: Germany's new economics minister

On February 10, 2009, the 37 year-old Karl-Theodor zu Guttenberg became the youngest person ever to be appointed Germany's economics minister.

Zu Guttenberg has been in ceaseless action since then, trying to put out the many fires burning in this time of worldwide recession. His drive and his ability to keep cool even in the highest pressure of situations have won him kudos with the media in Germany and in the world.

Guttenberg's qualifications for managing Germany's recovery were gathered in Bavaria. In 1994, von Guttenberg, a lawyer by profession, assumed a senior position at the helm of the Munich-based Guttenberg GmbH, the company holding the assets of his family, which is one of the oldest and most illustrious in European aristocracy.

The dynasty's seat is Bavaria's administrative district of Lower Franconia.



## Hot technologies Holger Braunschweig and his wonderful world of new materials

No one, not even Holger Braunschweig himself, is quite sure where his breakthroughs will lead. Everybody – and especially the jury conferring the Leibniz Prize – is, however, sure that their impact will be huge.

This certainty of belief led to the winning by Braunschweig, a professor of anorganic chemistry at the University of Würzburg, of a 2009 Leibniz Prize. Both its endowment - €2.5 million - and its prestige make the Prize the most important in German research.

The uncertainty as to his breakthroughs' impact stem from the nature of Braunschweig's achievement. Rather than synthesizing a single new material or a new application for an existing one, the scientist, who was born in 1961, has come up with an entirely new class of materials. These are compounds of boron and other organic materials with transitional metals.

These new compounds, in turn, could well be the building blocks of revolutionary new catalysts, polymers and other materials.

The lack of certainty as to the final use of Braunschweig's findings hasn't prevented him from being one of world science's most sought-after contributors and speakers. Since 2005, he has published more than 30 articles in leading journals of chemistry, and has given more than 50 lectures during the time.



## Bavaria in space GOCE gets a bead on gravity

Reiner Rummel's 20-year dream became a reality on March 16, 2009. On that day, the pan-European GOCE (Gravity Field and Steady-State Ocean Explorer) satellite was launched into orbit.



The head of the Technical University Munich's Institute for Astronomical and Physical Geodesy, Rummel had envisioned sending into space a satellite equipped with an ultra-sensitive gravity gradiometer.

Doing such would give humanity its most accurate view ever of the earth's gravitational field, and, thus of the forces shaping it. These include primarily the Earth's 'innards'. These, in turn, shape the circulation of the oceans and thus the workings of the climate.

Realizing this dream took twenty years of planning and implementing for the team headed by Rummel, the chairman of the GOCE Mission Advisory Group, and comprised of 10 institutes from seven countries.

His dream may have been fulfilled, but his work is by no means over: Rummel and his institute at TUM are participating in the compiling and evaluating of the data broadcast by GOCE in what is forecast to be a 20-month mission.



SOURCE: EADS

## Innovation@home Twenty four for the world Bavaria's universities of applied sciences

None of them is older than 39. Most are located in small cities and towns. And, until recently, their main objectives were defined to be turning out engineers and other technical personnel so badly needed by employers.

Bavaria's 24 universities of applied sciences would appear to be unlikely candidates for worldwide technological renown.

But that in fact is the case. Whether it be in the fields of computer graphics, aerospace engineering, beer brewing, wood-based building or dozens of other cutting-edge sectors, the universities are worldwide technology leaders.

And that's because of the close working relationships they've entered into with state manufacturers and research institutes.

### More hot facts...

#### **Georg Simon Ohm/Nuremberg**

Many of the world's most exciting computer games and animation programs were developed by this hotbed of advanced media engineering and design.

#### **Rosenheim**

Located in the gracious southern Bavarian town of the same name, the Rosenheim University of Applied Sciences is one of the world's leaders in creating new applications for the world's fuel and oldest building material: wood.

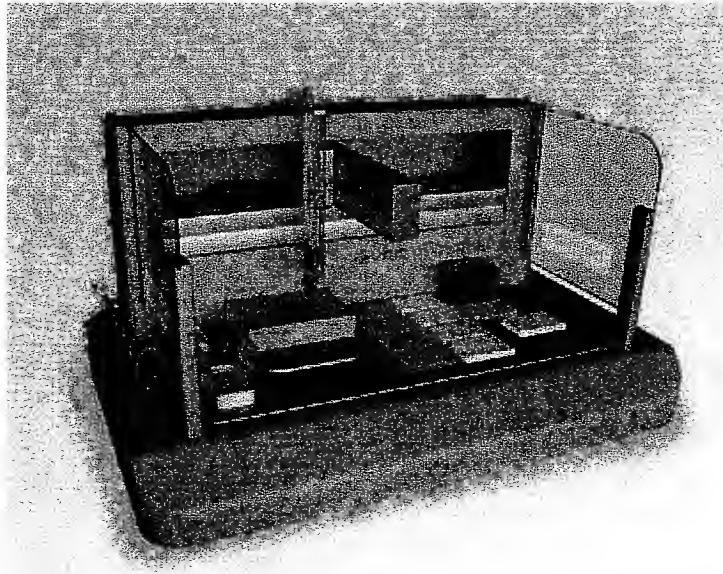
#### **Weihenstephan**

With its main campus located in the northern Munich suburb of Freising, and with others in Straubing and Triesing, Weihenstephan has long been a forerunner in the developing of better (more efficient, yielding higher quality products) agricultural technologies. Today, Weihenstephan is a major center of 'green' (agriculture-use) biotechnologiesstands.

## Nanion: speeding up the pharmaceutical pipeline

Bavaria's life sciences sector is thriving. One reason is that it is delivering the devices giving researchers new speeds, ranges and capabilities of drug discovery.

Prime among the state's enablers is **Munich's Nanion**. It has replaced pipettes with chips in 'patch clamp systems'. By doing so, Nanion has increased research throughput ten-fold, and has given the life sciences new methods of investigation.



The focus of Nanion's work are the pores in living cells. Going by the name 'ion channels', these tiny pores (70,000 of them have the diameter of a human hair) serve as the conduits for flows of ions in and out of the cells.

One of the key focuses of medical researches is using electrical current to detect how drugs are affected the flow of ions through these channels. Scientists used to conduct this research on a one-on-one-on-one basis—one pipette being applied to one cell at one time.

Since this involved a microscope and fine-tuning, it was a lengthy, often frustrating process.

Considering that a typical drug development project can involve testing up to one 2 million compounds, you can see why this research wasn't exactly fast-paced.

Enter Nanion's chip-based High Throughput Screening systems. The winners of numerous prizes, these use automation to impart vastly greater speeds, precisions and ranges of operation.

The heart of this system is a chip upon which several cells are placed using negative pressure.

### Nanion's business story



#### Nanion's business story is as interesting as its technology one.

In 2001, CEO Niels Fertig, then a pre-doc at the Center of Nanoscience at Munich's Ludwig-Maximilians University, decided to realize his vision of spinning off his research. To do such, Fertig and his partners took part in the city's Businessplan Competition.

A year later, honed with the insights gained from this participation, Fertig started up Nanion. Since then, the company has accomplished two difficult feats. It has systematically upgraded its products and services, and has been profitable while doing such.

This makes it a rarity in the world of biotech, in which a company's early years are generally associated with "cash burning".

### More hot facts...

Of the 150 largest solar parks in the world, 16 are located in Bavaria.

In 2005, Bavaria alone accounted for one quarter of the PV facilities set up worldwide. In 2006, the number of PV facilities installed in Bavaria was larger than that of the USA and Japan combined.

About half of Germany's solar electricity facilities are located in Bavaria.

Held May 27 – 29, 2009 in Munich, Intersolar cemented its position of being the world's leading trade fair for the solar power industry, attracting some 1400 exhibitors. Occupying 100,000 square meters of floor space, these stands were visited by 60,000 people.

## From Bavaria: the next industrial revolution

Making robots see: MVtec

MV (machine vision) systems are going to revolutionize manufacturing. Such systems are comprised of industrial robots and image capturing and processing technologies.

Industrial robots are unexcelled at doing complex and repetitious tasks. That's why they were for a very long time the mainstays of assembly lines.



Such robots have, however, two grave flaws. They are blind and they are dumb. They lack the eyes and the intelligence to recognize and respond to such unexpected situations as variations in operations or components of inferior quality.

That's where human beings shine. And that's why many manufacturers have been deploying people instead of robots on such lines.

A number of companies have striven to solve that problem by coupling cameras to robots. The problem with their MV systems was that each involved a huge amount of proprietary programming. This programming, in turn, priced such systems out of the reach of many users.



Enter Munich's MVtec. Its Halcon standard software requires no extra programming, and enables the quick and problem-free creation of a full range of MV applications.

MVtec has also created ActiVisionTools. It is designed to meet the needs of SMEs (small and medium-sized enterprises).

These two software packages make MVtec a world technology leader in the MV (machine vision) field. The company was founded in 1996 and is headed by CEOs Dr. Wolfgang Eckstein and Dr. Olaf Munkelt.

## Regenerative fuels fuelled power plants

Bavaria doesn't have oil or natural gas. It is, however, abundantly blessed with another of fuel: wood.

The byproducts of its €1.5 billion-a-year lumber industry and of the downstream sectors using its products (furniture and construction) are turned, along with other organic materials, by **biomass power plants** into heat fed into district heating systems in

**Pfaffenhofen:** south central Bavaria

**Mark Schwaben:** greater Munich

**Hauzenberg:** eastern Bavaria

As befitting its largest-state-in-Germany expanse, Bavaria has a huge agribusiness sector. Its wastes are turned into **biogas** and then combusted at some 1350 facilities in the state.

The largest of these biogas power plants (and the largest in the world) was commissioned in May 2007 in  
**Pliening/Ebersberg:** greater Munich.

It may well be Bavaria's greatest source of clean energy, and it is invisible – at least unless you have a camera to slip down into a hole drilled anywhere up to 5,000 meters below the surface of the southern part (Alps to the Danube) of the state.

That's where the state's aquifer of geothermal water is located. Tapping its 30°C – 140°C heat are a large number of **geothermal energy stations**. With 90 fields in Bavaria either already being tapped or set for exploitation, these include

**Simbach:** eastern Bavaria: heat

**Unterhaching:** greater Munich:

heat and up to 3.4 MW of electricity

**Sauerlach:** greater Munich: (to be completed in 2009)  
 heat and up to 8 MW of electricity

**Munich:** located in the eastern Munich borough of Riem: heat

**Dürrnhaar/Aying:** greater Munich  
 (to be completed at the end of 2009) electricity

## Playmobil and the joys of ethical toys

Playmobil's toys are not associated with star wars or treks or bat or super men. Once put together, they pretty much stand around. Nor are they produced in China, Vietnam or other low wage countries.



Source: Playmobil

The only thing kids can do with the toys is to use their sense of imagination and play with them.

Sounds like a recipe for a business disaster. It is, in fact, quite the opposite. Headquartered in Zirndorf, a town in Central Franconia, Playmobil is indisputably one of the world's most sustainably successful toy companies.

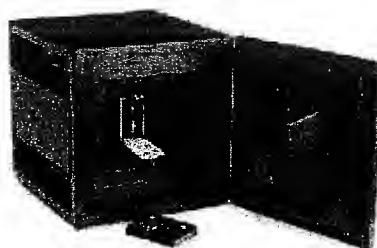
In 2008, a year in which many other large-sized toy companies were crashing and burning, Playmobil had sales of €452 million, up 6% over 2007. Playmobil's owner, the Brandstätter group, recorded a corresponding rise in sales of 8%, going from €459 million to €496 million – and creating 100 jobs in the process.

To assure high product quality, Playmobil's police officers, Viking chiefs and airports are manufactured in Germany and in fellow EU members Malta, Spain and the Czech Republic.

## Secumem: saving companies' most valuable asset

Based in Munich, Secumem has come up with the recession-beating product: vaults protecting hard disks against fires, floods, earthquakes and other disasters. Going by the brand name 'Threx', the vaults are coupled with sophisticated data backup systems.

**We're talking about the highest levels of security here.**



Worried about fires? Threx can withstand heat up to 1000°C. Worried about lightning bolts? Threx can handle up to 250,000 volts. Worried about break-ins? Threx isn't fazed by crowbars or hammers. Worried about earthquakes? Threx can withstand up pressures up to 100 kN.

The winner of 2008's Munich Business Plan competition, Secumen was founded at the beginning of 2007 by Adriana and Dirk Brunner.

As they point out, the reason why Secumen can guarantee such a high level of quality is the company's policy of procuring supplies from producers based in the Munich region.

More than four fifths of the 500 parts going into a Threx are manufactured by producers in greater Munich.

## Playmobil's story of success

**These results set forth a remarkable if somewhat twisting story of success.**

Founded in 1876, Brandstätter started out producing locks for caskets. The company then branched out into metal goods and then, after World War II, into telephones and piggy banks.

The company produced in the late 50s its first toy—the Hula Hoop. In the 1970s, competition from low-wage countries and the rising price of plastic (caused by the oil crisis), forced Brandstätter to cast about for a new money-earner.

It was then—in 1974—that Hans Beck, the company's chief designer, finalized his idea of creating little figures coming equipped with the appropriate settings.

It took a lot of grit on Beck's part to first convince his boss Horst Brandstätter to give his brainwave a try. It then took Brandstätter lots of hard selling and a few ingenious ploys to convince the toy world that Playmobil was the coming thing.

## Key figures

**75,000.** That's the number – the largest of any state in the world – of producers of solar electricity feeding into e-On Bayern's grid. This, in turn, serves three quarters of Bavaria's surface area – meaning that the actual figure could well be up to 100,000.

Bavaria's producers of solar electricity range in size from families which have placed small-sized photovoltaic (PV) panels on their houses' roofs to the €15 million solarpark in northwestern Bavaria's Erlasee/Arnstein.

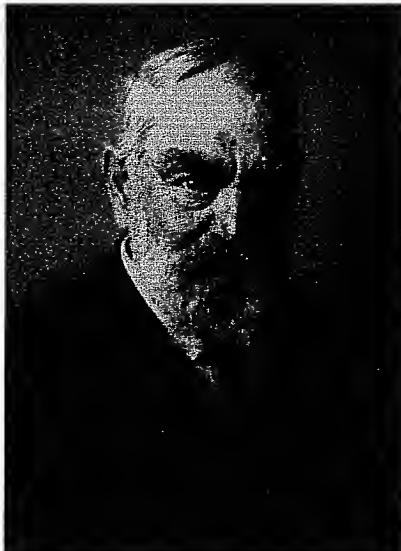
Its output is 12 megawatts – the largest in the world. All told, the state's solar producers generate as much electricity as three coal-fired power plants.

## Making their mark: Bavarians who built Bavaria

### Oskar von Miller:

#### switching on the entire world, and putting the entire world in a museum

The world owes a lot to Oskar von Miller. Like its electricity grids. Like its ways of producing and storing electricity. And like the museum showcasing these and all other technological innovations.



Oskar von Miller was born in 1855 in Munich. After earning a degree in engineering at today's TUM (Technical University Munich), he devoted himself to advancing the use of electricity.

With path-blazing results. In 1882, von Miller managed a feat which turned electricity from a plaything of technology fans into the world's main source of energy: he set up the world's first long-distance (the 57 kms from Miesbach to Munich) transmission line.

Von Miller didn't stop there. After building Germany's first power plant in 1884, he worked on developing ultra-high capacity and long distance power lines - successfully. In 1891, one of his power lines transmitted 20,000 volts of three-phase alternating current.

This breakthrough made AC the world's standard, and served as the cornerstone for electricity grids around the world.

Von Miller's passion for developing electricity led to him to achieve a large number of other significant electricity - related achievements, including the building of what was at the time the world's largest hydraulic power plant.

But the achievement for which he is best remembered had to do with another passion: collecting innovations.

On May 7th, 1925, on von Miller's 70th birthday, and after 22 years of collecting, fund-raising and building, his greatest dream came true - of amassing in one building all of the technological breakthroughs made by humanity over the ages.

It was on that day that the Deutsches Museum was commissioned.

In view of von Miller's objective, it's not surprising that the new building and its collection were large - very large. Today the museum's 55,000 square meters of space are home to 20,000 objects of exhibition. All told, its collection has 100,000 such objects. And its peerless library has 900,000 of the world's most important manuscripts of scientific endeavor and achievement.

These figures make the DM the largest single-building museum of technology in the world. The Smithsonian is larger, but is comprised of 16 individual museums.

### von Miller's legacy: reliable electricity

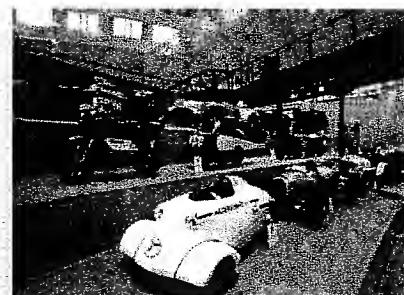
Thanks to von Miller and his successors, Germany has one of the lowest rates of power outages in Europe and one of the lowest in the world. Outages average 22 minutes per customer per year, reports the Association of Bavaria's Electricity Industry. Comparable figures for France, the UK, Spain and the USA: 51, 61, 118 and 214 minutes.

### Deutsches Museum's two offshoots

To making taking in its exhaustive and sometimes exhausting collection a bit more doable, the DM spun off two of its collections into museums of their own:

#### The Transportation Center

Located in the spacious, Industrial Age buildings once housing Munich's trade fair grounds, the Center has many of the DM's most enduring 'hits' with young and old: 19th century trains and 20th century cars, buses and trams.



#### The Aerospace Museum

Located in the northern Munich suburb of Ober-schleißheim, the museum has a Smithsonian-like collection of aircraft, rockets, helicopters and much more.



## Places to know, places to go in Bavaria

### Deutsches Museum and its two offshoots in Munich.



Each year, some 1.4 million people visit the DM - and that's not just because of its mind-bogglingly large and fascinating collection.

It's also because of its location, on an enchantingly green island in the Isar River (keep an eye out for the beavers who are now residing there!), and within a short walk from Marienplatz and the rest of downtown.

It's also because of Kid's Kingdom, located in the museum's bottom floor and 1,300 square meters of hands-on fun for children up to 8 years of age.

Re the collection: there are two things of which you can be sure.

**1.** It has an exhaustive and enchanting exhibition on anything you are interested in, no matter how arcane, including medieval medicine making and alchemy, state-of-technology satellite navigation systems, windmills through the ages, and early rockets, computers and microelectronics chips.

**2.** You will always get sidetracked while making your way to interest of choice. Who can resist a glance at Viking ships or wraparound views of the universe? Who doesn't want to try their hands at the fiendishly complicated but oh so simple-looking games on the fourth floor?

The Deutsches Museum is open every day (except for eight days during the year) from 9 am – 5 pm. [www.deutsches-museum.de](http://www.deutsches-museum.de)

### Buttenheim



One billion pairs of blue jeans are sold every year. Five billion are found in the world's closets. All of these are the products of a single, brilliant idea - of using upholstery fabric for work clothes - which flashed in 1873 into the mind of a 44 year old immigrant to the USA from the northern Bavarian town of Buttenheim.

The immigrant was of course Levi Strauss. His house of birth has been turned into museum detailing the life and times of Strauss and his family. If you're serious, very serious about jeans, this is the place to go.

[www.levi-schiff-museum.de/](http://www.levi-schiff-museum.de/)



### Augsburg's Fuggerei



The Fuggerei is every modern urban dwellers' dream: low rents (88 cents a year) and traditional architecture (pretty much unchanged from its year of building in 1523) in a gated and walled community (gates are locked from 10 pm to 5 am) located in the heart of one of Europe's most beautiful cities: Augsburg.



The Fuggerei's rents and affirmative action policies (its 150 residents are proactively recruited among the aged, afflicted and impoverished) also make it the role model for every crusader for social justice.

Odd that this template for social care should have been built by one of the most grasping capitalists of his (or any) time: Jakob Fugger (1459-1525), scion of the fabled banking dynasty.

Odd - and ironic - that the best known remnants of the House of Fugger's fabled wealth are these 140 dwellings for the poor. [www.fuggerei.de](http://www.fuggerei.de)

## Cool bikes from Bavaria

**Want to bike in style down Bavaria's bikeways?  
Get a Ghost or Corratec bike.**



There are important similarities between BMW's cars and Ghost bikes. They are largely made (designed, engineered and manufactured) in Bavaria. Their names are thus synonymous with ultra-high performance and quality.

Besides the fact that one of these companies does not include engines in its products, there are, however, a couple of important differences.

Whereas BMW is one of the world's most easily recognized trademarks, Ghost Bikes are known only to a relatively small circle of bikers.

Although that's now changing, thanks to what happened in Beijing in 2008. Riding a Ghost bike, Sabine Spitz won the gold medal in women's mountain biking.

## B&B: in Bavaria, it means "bed and biking"



116 routes and a total length of 8700 kilometers: Bavaria has, indisputably, the largest grid of bikeways of any region in the world.

One reason for the grid's size: Bavaria is by far Germany's largest state.

One reason for its popularity: on these routes are Bavaria's world-famous castles, pristine lakes, rippling rivers and picturesque cities.

Another reason for the bikeways' popularity: the 800 certified B&B (bed and bike) hotels, pensions, camping grounds and hostels lining them.

According to the Bavarian chapter of ADFC (association of Germany's cyclists), these B&Bs range in luxuriousness from four-star hotels devoted to pampering cyclist and cycle in every conceivable way to "hay hotels" – barns offering bikers a very immediate way to get back to and into nature.

These B&Bs join with the following routes in explaining why Bavaria was voted Germany's best place to bike in the 2009 edition of ADFC's annual poll of bikers.

### Cool Bikes



#### Ghost Bikes

Located in Waldsassen, a town in the Bavarian Forest, Ghost Bikes was founded in 1993. Since then, in a perfect example of the unwavering pursuit of excellence producing strong business results, the company has grown steadily. It now employs 90 staff members. Its bikes are sold in more than 20 countries.



#### Corratec

Equally admired in the world of cycling, Corratec is headquartered in the southern Bavarian town of Raubling. It produces a full range of high-end road, mountain trekking and kids' bikes.

## Favorite routes

### Ride alongside the rivers

The routes running alongside the Danube, Altmühl, Inn and Main are some of the world's most popular, and it's easy to see why.

They are, by and large, flat. They make it impossible (well, very difficult) to lose one's way - just keep the river to your right or left. They offer instantaneous cool-offs and freshen-ups whenever so desired.

They also offer quick-changes of types of sport. If you want a break from cycling, rent a canoe or rowboat and take to the river. If you want to stretch your legs, what better place to do it in Passau, Landshut, Eichstätt or any others of the literally hundreds of scenic cities lining the rivers and their routes?

### Ride for romance

It is one of the most more picturesque and - well - romantic sights Europe has to offer. You cycle to the top of a promontory. Materializing before your eyes is a perfectly-preserved medieval town, complete and replete with turrets and towers and city gates. We're talking about Rothenburg ob der Tauber, Dinkelsbühl and the other favorites with the world's tourists linked by the Romantic Route.

It, in turn, runs the length of western Bavaria, junctioning at its southern end with two other hits with cyclists.

### Cycle-seeing in and around Füssen

Bavaria's King Ludwig II spent much of his childhood in Füssen's Hohenschwangau castle. He liked the area so much that he decided to build a castle of his own there: Neuschwanstein.

The two castles form the starting and ending points of an 80 km route taking in the churches, villages and lakes (including the majestic Forggensee) forming, along with the mighty Alps to the immediate south, the landscape so loved by Bavaria's beauty-crazed king.

### Mighty in the mountains

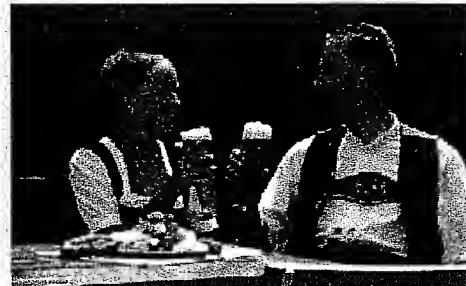
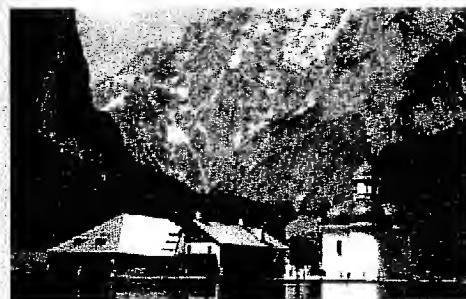
Füssen is also a major stop on the Lake of Constance - Königssee (Lake of Kings) route, which is reportedly the longest (418 kms) and one of the most challenging in Bavaria. That's because it runs alongside (and sometimes through) the Alps.

Equally challenging and nearly as long is the route paralleling the Bavarian-Czech border. For most of its length it goes by the name "Green Roof" route. The 'green' and the 'roof' is a reference to the Bavarian Forest, whose wooded heights (up to 1456 meters) this route traverses.

### Here to fare

Other favorites take you to (but not necessarily out of) Munich's beer gardens, Upper Franconia's breweries and lower Franconia's vineyards and route-side inns.

For further information:  
[www.bayernbike.de](http://www.bayernbike.de)



## New and newsworthy

### Israel is number 20!

Bavaria and Israel have a close relationship, with more than 1,000 of the state's companies doing business in the country. Of these companies, no less than 350 have set subsidiaries, offices or working relationships in and with Israel and its businesses.

On March 24, 2009, that close relationship got a bit closer. On that day, the state of Bavaria opened its office for Israel in Tel Aviv. It is the twentieth in the state's world-spanning network. The office is headed by Godel Rosenberg, a seasoned veteran of international business.



### Munich: Germany's number one IT market

€3040 per employee per year. That's how much Munich's companies spend on IT. This makes Munich's business community the biggest IT spender among Germany's 429 cities and counties, reports a study published in March 2009 in Computerwoche.



### The Allgäu does it again!

A few months ago, it was America's AGCO which made a hundred million euro investment in the southwestern Bavarian region of the Allgäu. This time, it's Nestlé's turn. The Swiss food giant, the largest in the world, is going to spend €108 million to expand its baby food production facility in the eastern Allgäu town of Biessenhofen.



### Bavaria's Quality Prize 2009:

#### three winners, one ultra-high standard of quality

It may be the toughest award to win in Bavaria—the state's Quality Prize. And that's because the competition is so great. There are simply so many companies in the state manufacturing products which are worldwide benchmarks for performance.

This year's winners were:

#### - MANN + HUMMEL

Located in Marklkofen, Lower Bavaria, the company is a producer of filter and suction systems and plastics-based components for the automotive and industrial engineering sectors.



#### - KSB AG

Headquartered in Pegnitz, Upper Franconia, KSB manufactures armatures used in the industrial engineering sector

#### - MTU Aero Engines GmbH

The Munich-based MTU is Germany's leading manufacturer of aircraft engines and the world's number one supplier of related maintenance services



### Inventions the world has been waiting for:

Researchers at TUM (Munich's University of Technology) have eliminated one of humanity's biggest time-wasters: the "it won't come out" ketchup bottle. Their bottle is made out of a new kind of glass. It is so smooth that it serves as a slide zooming the ketchup out of the bottle and on to your hamburger!

**Bavaria goes abroad: trade fairs and business trips**

Bayern International, Bavaria's international business development arm, is facilitating the following trips in 2009.

Delegations headed by Martin Zeil (Bavaria's economics minister) or by Katja Hessel (state secretary)

**Business trips:**

**Eastern Russia**  
industrial engineering  
July 15 – 24

**Kiev, Ukraine**  
construction  
autumn

**Delegations:**

**India**  
**(Delhi, Chennai, Kolkata)**  
October 25 - 31  
Registration by July

**Cuba and Columbia**  
November 1 - 8

**Poland (Cracow, Lodz, Poznan)**  
November 25 - 27

**For further information:**

Bayern International  
Ms. Agnieszka Eckert  
aeckert@bayern-international.de  
www.bayern-international.de  
+49-89 660 566 301

**At your service**  
**Trade fairs in Bavaria**  
**July 1 – September 30th, 2009****Trade fairs in Munich:****BIKE Expo**

Leading trade fair for the bicycle industry  
July 23-26, 2009  
www.bike-expo.com

**DRINKTEC 2009**

Beverage and liquid food technologies  
September 14-19, 2009  
www.drinktec.com

**Trade fairs in Nuremberg:****Fach Pack**

Packaging technologies  
www.fachpack.de

**Print Pack**

Printing and production of packagings  
www.printpack.de

both September 29 – October 1, 2009



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## Contact

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### Invest in Bavaria

Bavarian Ministry of Economic Affairs,  
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Prinzregentenstr. 28

80538 Munich | Germany

Tel.: +49 89 2162-2642

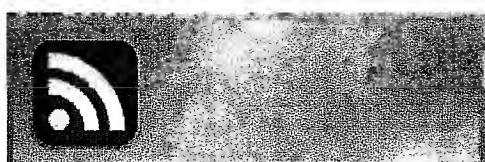
Fax: +49 89 2162-2803

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This material is circulated by the Bavarian Ministry for Economic Affairs, Infrastructure, Transport and Technology Office for Economic Development on behalf of the State of Bavaria, Federal Republic of Germany. Additional Information is on file with the Department of Justice, Washington, D.C.

**What's inside****From Bavaria:**

- world's largest environmental project
- world's most promising anti-cancer medication
- green tech for the Global Green Recovery
- no recessions for Bavaria's world champions

These big plans come with a big price tag – €400 billion. This will be shared by the consortium's members, which include, in addition to Munich Re, such other Bavaria-headquartered companies as Siemens and Schott Solar.

Desertec's plans strive to capitalize on one of the world's greatest unused assets – the sunlight baking the world's deserts.

As the Desertec Foundation points out: "Within six hours, deserts receive more energy from the sun than humankind consumes within one year."

The 'green electricity' produced by Desertec's solar thermal plants (in which banks of mirrors concentrate the sun's light into a blindingly hot beam turning water into steam) is going to vastly reduce the world's output of greenhouse gases. The project will thus counter climate change.

Important though it is, this thrust is just one of several key reasons for the consortium's undertaking the projects.

**Others:**

- to give Africa's economy a huge shot in the arm, and to make the continent a center of advanced renewal energy technologies
- and to thus stem the tide of illegal migration by giving Africans what they need and want most: jobs – at least 600,000 of them
- to give the industrialized world a sustainable, affordable and reliable source of power

**Bavarian companies participating in the Desertec Industrial Initiative**

**Munich Re** (Munich) coordination and financial expertise

**Schott Solar** (Mitterteich) receivers

**Siemens** (Erlangen) transmission lines

[www.desertec.org](http://www.desertec.org)

2010 FED - 1

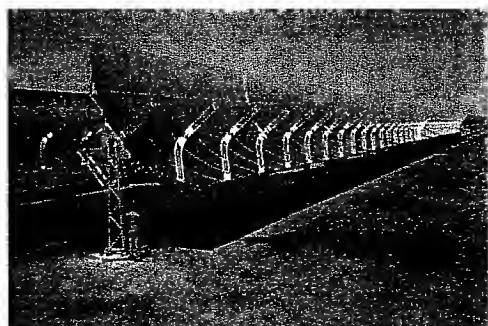
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## The world's biggest environmental project Being put together in Bavaria: €400 billion solar Sahara project

Ten years from now, 15% of Europe's electricity is going to come from solar power plants stationed in the Sahara.

These plants and the power lines transmitting their electricity will be set up by the Desertec consortium, whose setting up on July 13th in Munich was lead managed by Munich Re, the world's largest reinsurer and a major and effective proponent of environmental improvement.



## The world's most promising medication for one of the world's worst cancers



A medication created by Regensburg's Antisense Pharma to treat fast-growing brain tumors (reported on in BB 1) proved smashingly successful in Stage IIB tests.

These results caused a Phase III study, going by the name "Sapphire", to be launched in April 2009. No less than 70 hospitals

and other centers of medical treatment are involved.

Being tested is trabedersen. This bioengineered antisense molecule destroys the shield protecting cancer cells, thus enabling the body's immune system to detect and destroy the tumor.

The success shown by trabedersen in inhibiting the production of TGF-beta 2, the factor facilitating the creation and protection of tumors (glioma and glioblastoma), has caused the commencing of Phase I and Phase II trials on such other malignancies as those of the pancreas and skin.

Antisense was founded in 1998 by Karl-Hermann Schlingensiepen, one of Germany's leading tumor researchers, and by three other members of his family.

## Life sciences in the Munich region Case study: Mikrogen

### Twenty years of creating products which the world needs: tests for HIV and other grave illnesses

Mikrogen was Munich's first biotech.

It was founded in 1989 by Manfred Motz and Erwin Soutschek to capitalize upon a breakthrough created in the laboratories of Munich's Max Pettenkofer Institute (itself part of the city's Ludwig Maximilians University): a system based on bioengineering antigenes extracted from bacteria to make them capable of quickly and precisely testing for pathogens.

The system went on to become a leading product.

Today, Mikrogen's antigen-based products are also used to detect such other grave diseases as hepatitis and the Epstein-Barr virus.

The company has gone from being two people working in a 60 square-meter large 'minilab' to 110 staff members occupying a modern facility in southern Munich.

The secret of the company's longevity and success? According to Erwin Soutschek, it was a paucity of capital.

"Since we didn't have huge reserves of funds, we were forced from the very outset to earn money," he explained. This need to generate income led the company to offer such services as the production and purification of recombinant and lysate antigens.

## Bavaria's life sciences community:

### key facts, figures and forecasts

#### Total turnover:

€10.5 billion in 2008  
(up 74% over 2005 for the region's SMEs)

#### Total workforce:

30,000

#### Working for

150 biotechs  
55 pharmaceuticals  
53 CROs (commissioned research organizations)  
127 suppliers, wholesalers and others  
8 top research institutes

#### Key facts:

50% of Germany's new medications stem from Munich's life sciences community

60% of Munich's life sciences companies are experiencing further growth in 2009



## From Bavaria's life sciences sector: breakthroughs which the world has been waiting for

**Chromobodies flashing live broadcasts on medications' effectiveness in cells  
Chromotek, Planegg**

Given the ability to fluoresce –and the smallness enabling them to slip into living cells.

These two traits have transformed the development of new medications from a black box, in which large-sized antibodies were set loose on dead cells and the results were interpreted in a variety of indirect ways, into a glass 'broadcast studio'.

This bit of bioengineering wonder was worked by Chromotek's CEO Dr. Ulrich Rothbauer, who, as he says, „fused the antigen-recognizing fragment of heavy-chain antibodies extracted from camels with fluorescent proteins“.

ChromoTek was founded in 2008, and has since won five major awards for startups and technologies.

### Computer-based simulation and training programs for surgeons

#### SurgicEye GmbH, Munich

Surgeons are about to get a tool which airplane pilots have availed themselves of for many years: ultra-detailed 'real life' simulation programs. These programs will enable surgeons to rehearse such complicated operations as the removal of brain tumors.

The programs will also train surgeons in the use of computer-conveyed images in surgical procedures.

The programs are being developed by SurgicEye, which was founded in 2008 by Thomas Wendler and Joerg Traub, two young scientists.

### Cell cultures simulating microtumors

#### Spherotec, Munich

The more and the more variegated tumors you test them on, the better you know whether a new drug is capable of treating cancer.

This truism led Barbara Mayer and Ilona Funke to create a technology capable of rapidly spawning a large number and variety of spherical cell cultures (hence the company's name) highly similar to cancers.

Maintained in a proprietary bank, these cultures are vastly shortening drug development, profiling and application procedures, as they permit the use of MP (massively parallel) methods.

Spherotec was founded in 2006.

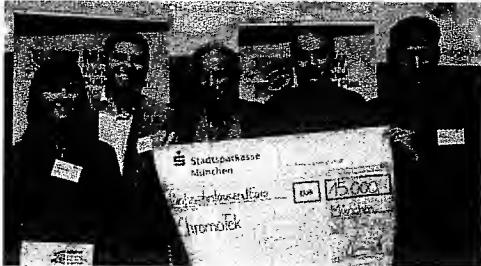
### Contact Life Sciences

Benjamin Emans

benjamin.emans@invest-in-bavaria.com

+ 49 89 2162-2209

You can literally see them go about their business of detecting and destroying invaders in cells. That's because chromobodies have been given the ability to fluoresce –and the smallness enabling them to slip into living cells.



## From Bavaria, green tech for the Global Green Recovery

By 2020, the world will be spending €3.1 trillion every year on the GGR – global green recovery, reports a major study released in May by Germany's environment ministry and compiled by management consultants Roland Berger.

Major beneficiary of the world's push to remediate all of the many problems afflicting its environment will be Germany's world-largest green tech industry, which is accordingly forecast to experience a doubling of revenues – to €400 billion – by 2020.

Driving force within Germany's industry is Bavaria, whose green tech companies are the leaders in turning mobility, energy generation and use, and manufacturing into forces remediating the environment.

In addition to Munich and Nuremberg, two communities which are at the center of the green tech movement are Straubing and Augsburg.

### Straubing: if it's organic, it's a fuel!

Everything organic is a valuable fuel, be it waste cooking lard or mown weeds or sewage sludge.



You just have to find a way of efficiently extracting and utilizing its energy.

That's the approach taken by the renewable fuel experts staffing the institute and technology and incubation center located in the eastern Bavarian city of Straubing.

By developing the dedicated equipment and the procedures and supplies requisite to using it, the experts have turned using renewable fuels into a very precise science – and a very big business.

The experts' manuals, charts and position papers help policy-makers, farmers and entrepreneurs enter and succeed in the business of turning regenerative fuels into green energy.

[www.konaro.bayern.de](http://www.konaro.bayern.de)

### Augsburg: and climate protection takes flight



Environmental protection has a new buzz acronym: CFC.

It stands for "carbon fiber composites".

The reason why environmentalists are so excited about CFCs is that they team up two winning traits.

They are ultra-light and ultra-strong – 30% lighter and up to five times stronger than steel.

These traits have led to CFCs being widely used anywhere where fuel efficiency is mission critical – in space craft, racecars and airplanes.

Less weight = lower emissions and thus less environmental impact. This equation is motivating the ever-growing use of CFCs in aircraft and cars.

CFCs have other environmentally-friendly traits. They can be engineered to be impermeable to heat, thus making them ideal for use in energy-conserving doors and window frames.

Augsburg is a center of world development of CFCs. That's partially due to its industrial tradition.

MT Aerospace and Premier Aerotec (EADS group), two of Germany's leading suppliers (for the ARIANE launcher, Airbus, A400M, Typhoon and Tornado programs) of aerospace systems and components, maintain extensive production facilities in the city.

To further the development of deployment of CFCs, Premium Aerotec, in fact, is building in Augsburg a €140 million "high-tech factory". Completion date: 2011. This factory will employ the VAP (vacuum assisted process) technology developed by Premium Aerotech. It cuts times of production of plastic-based components by 20%. VAP also reduces the consumption of energy.

The CFCs which these companies incorporate into the aerospace systems and subsystems which they manufacture stem from such nearby suppliers as SGL Carbon.

This weight of CFC-related activity led to Augsburg's being selected in 2007 as the headquarters for the new Carbon Composites e.V.

[www.carbon-composites.eu](http://www.carbon-composites.eu)



Members of this center for the development of CFC-related technologies are 87 leading research institutes, manufacturers, suppliers and systems engineers.

Another reason for locating Carbon Composites in Augsburg is the city's unparalleled track record of creating new environmental technologies. A number of these have been shaped at the city's dedicated incubation center.

Name to know: ZAE Bavaria



Founded in 1991 and headquartered in Würzburg, Bavaria's Center for Research into Applications of Energy (the translation of its German name) is a leading source of innovations in the areas of energy storage, conservation and generation technologies.

[www.zae-bayern.de](http://www.zae-bayern.de)

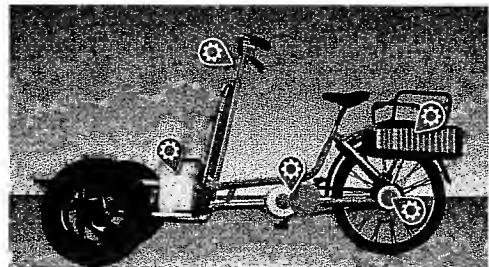
## Five Bavarian green tech start-ups to watch

### Clean Mobile AG, Unterhaching (founded 2006)

#### Fuel cell-powered small vehicles

The first company in the world to solve electrical vehicles' most pressing problems: the lack of capacity of lithium-ion batteries. The company's answer: an on-board DMF (direct methanol fuel cell) generating the electricity needed to keep the batteries charged.

Clean Mobile's drive trains will be incorporated into scooters, wheelchairs, E-bikes and other light vehicles

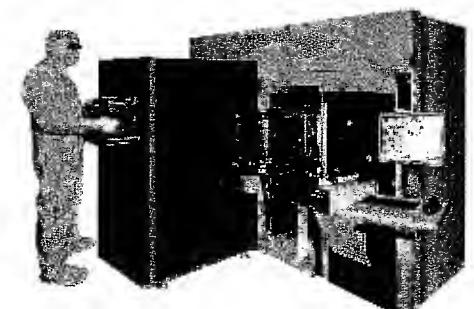


### Nanda Technologies, Munich (founded 2006).

#### No-waste semiconductor manufacturing processes

The semiconductor industry produces the brains of TIME (technology, information, media and entertainment industry) equipment and of PV (photovoltaic) systems. That's why semiconductors are one of the largest sectors in the world.

And, unfortunately, one with a great and deleterious impact on our environment.



Nanda's inspection systems solve one of semiconductors' worst environmental problems: the high rate of defective chips ensuing from the production process. Chips are, after all, full of toxic, hard-to-recycle materials.

The systems detect flaws in the operations of the lines producing chips. By doing so, they not greatly lower the rate of chips rejected. Nanda's systems also vastly increase the efficiency of production operations.

### a + f GmbH, Würzburg (founded in 2004)

#### Solar tracking systems

Each day, the sun moves from east to west across the sky. Devoted to turning the sun's light into electricity, photovoltaic modules do not have the capability of following the sun's movement. Because of this, they fail to capture about 30% of the energy available.

Enter a + f's SunCarrier, the world's most advanced solar tracking systems. They enable the modules to pivot and swivel, thus ensuring them of always facing the sun in an optimal way.

### ClimatePartner, Munich (founded in 2006)

#### Telling companies how to be good environmental citizens

Say "corporate-level environmental protection" and most people think of producers cutting their emissions into the ambient environment.

In actual fact, service providers and agribusinesses often have the greatest potential of reducing their environmental footprints.

Munich's ClimatePartner is a leading expert in showing companies how to realize this potential and to thus achieve sustainable growth. It does such by developing in-depth and all-encompassing systems for such areas as wine production and distribution, hotel and event management.

### Windpower GmbH, Regensburg

Windpower was one of the companies which has made Germany, although 61st in size among the world's countries, number one in terms of windpower output.

Windpower has been planning, building and securing financing for windpower facilities since 1995. To date, Windpower has facilitated the development of 12 major-sized facilities. Most of these are located in Regensburg and vicinity.

## Read all about it!

### A portal for clean energy

Founded by a thinktank based in the northern Munich techburb of Garching, [www.cleanenergy-project.de](http://www.cleanenergy-project.de) is a portal providing the latest news and in-depth briefings on ways to produce and employ energy without harming the environment.

Behind the portal are leading ecologist Dr. Maike Winter, a protégé of Al Gore, and the GlobalCom PR Network communications agency.

In addition to articles on energy-related issues and on innovations helping to solve them, the portal also reports on events and educational programs in the field.

A large portion of Clean Energy's input stems from its network, which is comprised of entrepreneurs, scientists and policy-makers based around the world.

### Contact Energy | Environment

Kristine Forster

[kristine.forster@invest-in-bavaria.com](mailto:kristine.forster@invest-in-bavaria.com)

+ 49 89 24210-7510

## No recessions for Bavaria's world champions

Forget complicated business plans and implemental strategies.

Bavaria's world champions have a very simple approach to business.

They make  
products which work.  
products which do things no others can.  
products which are thus best-sellers on their market.

Bavaria's world champions include

**Giesecke & Devrient**

**Kathrein**

**Krones**

### **Giesecke & Devrient: safest money and smartest cards**

**Headquarters:** Munich

**Founded:** 1852

**CEO:** Dr. Karsten Ottenberg

#### **Top products:**

**banknote manufacturing and printing services and systems** – more than 100 currencies are produced by G & D or manufactured using the company's equipment and supplies

**debit, credit, mobile telecommunication, authentication and other kinds of smart cards**

**governmental solutions:** passport and visa production, inspection and reporting systems and services

#### **New and hot:**

**magnetic line scan cameras absolutely ensuring the authenticity of banknotes and providing ultra-accurate identification of defects in oil and gas pipelines and other industrial systems**

**cryptographic modules authenticating users of smartphones**

#### **self-service kiosks producing payment cards**

**Key figures:** in 2008, sales of €1.7 billion, profits of €111 million, a workforce of nearly 10,000 (all three are all-time highs)



### **Krones AG: machines bottling the world's beverages**

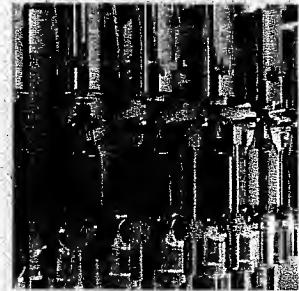
**Headquarters:** Neutraubling

**Founded:** 1951

**CEO:** Volker Kronseder

#### **Top products:**

**world leader in labeling machines for the food processing industry, in bottle inspection facilities, and in beverages filling and packaging systems;** materials processing facilities for the chemical and health care sectors, plant planning services



#### **New and hot:**

**A machine producing the world's lightest PET bottles, with all the accompanying savings of energy and materials**

**Key figures:** in 2008, consolidated sales of €2.4 billion and new orders of €2.3 billion, 10,333 employees (all three are all-time highs)

### **Kathrein-Werke KG: the world's ears to the skies**

**Headquarters:** Rosenheim

**Founded:** 1919

**CEO:** Anton Kathrein



#### **Top products:**

**antennas, receivers and transmitters for mobile communication systems, satellites and for broadcasting grids – 4,500 products all told**

70% and 45% shares of world market for UMTS and GSM-use antennas

#### **New and hot from Kathrein:**

**RFID-based tracking systems used in freight forwarding**

**DVBT (digital video broadcasting – terrestrial) transmission and receiving systems**

**Business figures** Business figures of €1.3 billion: turnover in 2008 of € 1.3 billion (all-time high), workforce of some 6100

## A state of culture

**Teaming ups enriching international culture  
Expat cultural luminaries and Bavaria's performing arts troupes**

**Mariss Jansons (Latvia)** conducts the Bavarian Radio Symphony Orchestra.

**Kent Nagano (United States)** conducts the Bavaria State Opera Orchestra.

**Nikolaus Bachler (Austria)** is the director of the Bavaria State Opera.

**Jonathan Nott (United Kingdom)** conducts the Bamberg Symphony.

**Ivan Liska (Czech Republic)** is the director of the Bavarian State Ballet.

**Martin Kusej (Austria)** is the director of the Bavarian State Theater.

Bavaria has some of the world's most celebrated orchestras, ballets, theaters and other cultural groups.

These are led by some of the world's most celebrated conductors and artistic directors.

The question arises:

are the stars responsible for making their troupes so celebrated, or did the troupes' fame draw the stars?

The answer is 'probably both'.

Case-in-point: Mariss Jansons and the Bavarian Radio Symphony Orchestra.

Founded in 1949, the BRSO was named in 2006 "one of the world's ten best orchestras" by authoritative trade magazine Gramophone.

Its conductors-in-chief have included the internationally-renowned Rafael Kubelik (Czech Republic), Kirill Kondrashin (Russia), Sir Colin Davis (UK) and Lorin Maazel (USA).

They molded the orchestra into a world-class ensemble.

The final steps to best-in-the-world rankings were undertaken under the leadership of Mariss Jansons, who was born in Riga in 1943 and who capped his twenty years of being one of the world's foremost conductors by assuming the helm of the orchestra in 2003.



## Names to know

### The Bavarian Finance Center

BFC was founded in 2007 to network all of companies, institutes and agencies comprising Bavaria's puissant financial community, to provide these players with access to the resources (qualified staff members, new dedicated software, information on regulations and innovations) which they require to develop their businesses, and to give them a conduit for their positions.

Headed by co-presidents Professors Dr. Wolfgang Gerke und Dr. Elmar Helten, and by CEO Dr. Felix Breuer, the BFC stages to that end the Bavarian Financial Summit on an annual basis. Although young (two years old), the Summit has already established itself as a closely-followed forum on current economic trends.

[www.bfz-ev.de](http://www.bfz-ev.de)

### Contact Financial Services

Regine Hutterer

[regine.hutterer@invest-in-bavaria.com](mailto:regine.hutterer@invest-in-bavaria.com)

+ 49 89 24210-7508



### Manching: Europe's largest military aviation center



Mostly very quiet, sometimes very loud, and always the largest.

That's the in-a-nutshell description of EADS' military aviation development center in Manching.

Manching is a central Bavarian town of 12,000. It's located right next door to Ingolstadt, whose fame stems from its being home to car manufacturer Audi.

In 2006, EADS, which is the world's largest aerospace company, decided to invest €100 million in grouping its Military Air Systems operations – components – for the development, production, testing and maintenance of aircraft and their components – at its 700,000 square meters large center in Manching.

The decision created the largest facility in Europe in this field. Manching's facilities employ 5,500 persons and have annual revenues of €2.3 billion.



Since then, things have been very quiet in Manching. And that's because putting together military aircraft is a hushed and hush-hush affair, in which technicians very quietly and efficiently go about their business of carrying out the up to 12,000 steps required to create such advanced aircraft as the Eurofighter or AWACs reconnaissance planes.

The only times the quiet is disturbed is when aviation engines – some of the most powerful in the world – are tested, or when aircraft land for maintenance or troubleshooting, or for conveying and picking up aerospace systems and components.

### Contact Aerospace | Satellite Navigation

Ursula Sieh

[ursula.sieh@invest-in-bavaria.com](mailto:ursula.sieh@invest-in-bavaria.com)

+ 49 89 2162-2388

## Apple's hot app



MobileButler is the best-selling app (application) in central Europe for Apple's iPhone – and the second best-selling one of all time worldwide.

That's quite a statement, considering that the iPhone is the lead member in the world's best-selling family of advanced communication devices – 37 million units. This family's popularity explains why Apple's AppStore offered, as of July 2009, 50,000 applications for the family. These apps have by now been downloaded one and a half billion times.

MobileButler reports on your telephone costs. It is the brainchild of Holger Frank, a Munich-based programmer, who has parlayed his app's success into a fast-

rising career as an IT entrepreneur.

Entwicklungsschmiede, Frank's recently-founded and Munich-headquartered company, leverages his expertise in designing, developing and troubleshooting applications into commissioned services for the iPhone, Android/Google and Java worlds.

## Contact ICT

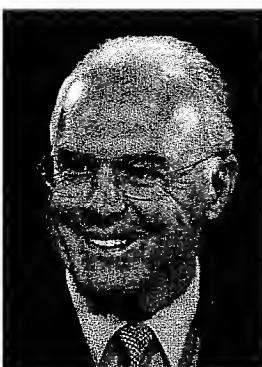
Regine Hutterer

[regine.hutterer@invest-in-bavaria.com](mailto:regine.hutterer@invest-in-bavaria.com)

+ 49 89 24210-750B

## Makers of modern Bavaria

### Franz Beckenbauer: football great



Great beer and great football.

Say 'Bavaria' and that's what comes to mind in many parts of the world.

The great beer is a product of thousands of brewers adhering over the last 50 generations to the highest standards of quality.

The great football is largely associated with one person: Franz Beckenbauer, who has been repeatedly voted Europe's greatest football player of all time.

This ranking is the product of Beckenbauer's sheer incredible achievements.

Beckenbauer was the driving force of the mid-70's FC Bayern München team which won three European club championships in a row.

Beckenbauer and his FC Bayern teammates—among them Gerd Müller, Sepp Maier and Paul Breitner—formed the nucleus of the German national team which won football's World Cup in 1974 and European Cup in 1980.

Beckenbauer went on to win another World Cup—in 1990, as coach of the German national team.

He capped his remarkable career by presiding over Germany's successful push to be the host of 2006's World Championships.

All told, Beckenbauer won 17 championships as a player and as a coach.

### Just a guy from Giesing

Giesing is where the working poor live in Munich. Beckenbauer was born in this gritty neighborhood in 1945. He spent his childhood playing sandlot football.

In 1958, happenstance caused him to sign up with FC Bayern München – a minor league team in those days.



By 1965, thanks largely to Beckenbauer, Bayern had ascended to the Bundesliga. The team won the Germany's Club Cup in the same year. Two years later, FC Bayern nabbed its first European championship. In 1969, the team won its first of what is now 21 Bundesliga championships.

### Key figure

**Number one.** Bavaria ranks first in Germany in safety. Bavaria has the lowest rate of criminality among the country's 16 states – and the highest rate of cases being solved. Safest city in the country is, not surprisingly, Munich!

[www.bka.de/pks/](http://www.bka.de/pks/)

## Places to know, places to go in Bavaria The coolest neighborhoods in Bavaria's cool cities:

### Munich!

Nymphenburg, Gern, Bogenhausen, Harlaching and Solln are sumptuously elegant. Schwabing, Neuhausen and Haidhausen are surpassingly pretty and artsy. Maxvorstadt and the Au are picturesque and replete with young creatives.



Hub of the Glockenbachviertel is Gärtnerplatz. This 'square' (it's actually round) is the place to see and be seen in the quarter.

### Nuremberg! Handwerkerhof Nürnberg

Nuremberg lives in the past.



sure whose centerpiece is one of the city wall's fortified towers, this 'craftsmen's yard' is home to 17 stalls and shops selling (and often producing on the spot) everything from miniature toys and glass figures to Lebkuchen (the ginger snaps so popular at Yuletide) and leather wares.

[www.handwerkerhof.de](http://www.handwerkerhof.de)

But the most vibrant neighborhood in Munich is the Glockenbachviertel. Named after the brook of the same name and located on the west bank of the Isar river, the quarter is replete with the clubs, bistros, charming stores and all the other essentials of an in-area – including a street life worthy of Berlin and San Francisco.

### Augsburg!

#### Maximilianstraße



Make your money by trading around the world, spend it on an imposing 'palace' (actually mansion) in the Maxstraße.

That practice was followed by Augsburg's commercial dynasties – among the Fuggers and Schäzlers – during the past seven centuries.

The practice made the Maximilianstraße (to give its full name) one of Europe's great avenues of architectural affluence.

Now resident in these Gothic, Renaissance, Baroque, Rococo and Neoclassical manses are restaurants, clubs, galleries, boutique and galleries.

They attract swarms of art-lovers and partygoers to the Maxstraße and its squares and their fountains.

At least as far as its millions of tourists are concerned. They flock to buy the traditionally-prepared foods and wares offered by the city's Christmas market, whose medieval look and feel makes it the biggest wintertime hit in the world.

These offerings are available all year round at the city's Handwerkerhof. Located in an enclo-

## Bavaria goes abroad: trade fairs and business trips

Bayern International, Bavaria's international business development arm, is facilitating the following trips in 2009.

Delegations headed by Martin Zeil (Bavaria's economics minister) or by Katja Hessel (state secretary)

### Business trips:

**South Africa**  
**MedFood Tech 2009**  
 food processing  
 October 4 - 8, 2009

**Romania**  
**2009**  
 wood industry  
 October 5 - 9, 2009

### Delegations:

**Cuba and Columbia**  
 November 1 - 8, 2009

**Poland (Cracow, Lodz, Poznan)**  
 November 25 - 27, 2009



### For further information:

Bayern International  
 Ms. Agnieszka Eckert  
 aeckert@bayern-international.de  
 www.bayern-international.de  
 +49 89 660 566-301



## At your service

### Trade fairs in Bavaria

**October 1 – December 31st, 2009**

### Trade fairs in Munich:

#### Productronica

Manufacturing technologies for the electronics sector  
 November 10 – 13, 2009  
[www.productronica.com](http://www.productronica.com)

#### Ceramitec

Systems and supplies for the ceramics and powder metallurgy industry  
 October 20 – 23, 2009  
[www.ceramitec.com](http://www.ceramitec.com)

#### eCar Tec 2009

E-mobility  
 October 13 – 15, 2009  
[www.ecartec.de](http://www.ecartec.de)

#### EXPO REAL

12th International Commercial Property Exposition  
 October 5 – 7, 2009  
[www.exposereal.net](http://www.exposereal.net)

### Trade fairs in Nuremberg:

#### SPS/IPC/Drives

Systems and components for the automation of electronics  
 November 24 – 26, 2009



Invest

in Bavaria



## Your key to our state

### Invest in Bavaria at Bayern International GmbH

provides investors with the information and services needed to get them going to and growing in our state.

[www.invest-in-bavaria.com](http://www.invest-in-bavaria.com)  
info@invest-in-bavaria.com

### Press and public relations

Dr. Johann Niggl  
Widenmayerstr. 34  
80538 Munich  
Tel.: +49 89 24210-7501  
Fax. +49 89 24210-7557

### BusinessBavaria

Editor-in-Chief: Markus Hautmann  
Senior Journalist: Terry Swartzberg  
Technical realization: Konrad Bayer



To stay up to date about the Bavarian economy on a daily basis use our RSS feed, which can be subscribed to at: [www.invest-in-bavaria.com/en/newsfeed](http://www.invest-in-bavaria.com/en/newsfeed)

**State of Bavaria United States Office /  
West Coast Division**

388 Market Street, Suite 1050  
San Francisco, CA 94111  
Phone: +1 (415) 362-1001  
Fax: +1 (415) 362-1030  
E-mail: [sanfrancisco@bavaria.org](mailto:sanfrancisco@bavaria.org)  
Internet: [www.bavaria-westcoast.com](http://www.bavaria-westcoast.com)



Invest  
in Bavaria

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Dear friends and colleagues,

Please find attached the latest copy of our new newsletter

**"Business Bavaria"**

This issue provides you with information and news about Bavaria's economy and business sectors, news on scientific research and groundbreaking developments, as well as touristic information and portraits of outstanding personalities.

The next issue of "Business Bavaria" will be released in October 2009.

If you need specific information or if you have any questions, please don't hesitate to contact us anytime.

We hope you enjoy reading "Business Bavaria".

Best regards,

The State of Bavaria Team

**State of Bavaria United States Office - West Coast Division**

388 Market Street, Suite 1050  
San Francisco, California 94111  
Phone: +1 (415) 362-1001  
Fax: +1 (415) 362-1030  
[sanfrancisco@bavaria.org](mailto:sanfrancisco@bavaria.org)  
[www.invest-in-bavaria.com](http://www.invest-in-bavaria.com)

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## What's inside

- From Bavaria: a chip saving lives and money
- Prudence pays off for Bavaria's profitable financial institutions
- Munich: best infrastructure in Europe, second best in the world
- Bavaria's hottest-in-the world solar power sector
- B & B: in Bavaria, it means bed and biking

### E-Call's 'heart' is an Infineon solution based on the X-Gold 101

Once an accident takes place—something that happens 1.4 million times a year in the EU—a crash sensor sends a signal to the chip's GPS and mobile telephony capabilities. They, in turn, notify the nearest emergency assistance post of the place and time of the accident.

The resultant 40% - 50% cutting of times of response will save both thousands of lives and up to EUR 26 billion a year in medical and other costs, reports the Union.

No more accident victims – of which there well over two million a year in the EU – lying trapped in a car or in a ditch, waiting helplessly and seemingly endlessly for a passerby to call the police.

**Saving money** – in another, very important way. The fingernail-sized X-Gold 101 is not only smaller than today's chips. It also reduces the number of electronic components in a simple mobile phone from over 200 to fewer than 50.

The X-Gold 101 does this by having a GSM baseband, RF transceiver, RAM, camera, mixed signal, power management and other capabilities built into it.

What this means: telephones equipped with the X-Gold 101 or Infineon's related XMM1010 platform are a lot cheaper--around 30%--than today's ones. No wonder that more than 100 million of these ULC (ultra-low costs) 'X' telephones have already been sold in Africa and Asia.

With many more to come. Half of the world's 6.6 billion people have never used a telephone. The 'X' telephones are going to change all that, forecast experts.

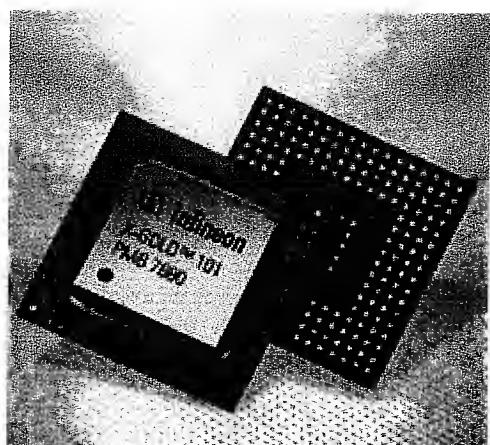
Exciting though these prospects and developments are, these are just the start of the 'killer apps' to ensue from Infineon's X-Gold and the XMM1010 families, reports Stefan Butz, who headed the Munich-headquartered Infineon's team of development.

"Is there any reason why computers, ticket dispensers, navigation systems or even keys to your house can't be equipped with these do-it-all chips?" he asks in an interview appearing in business weekly *WirtschaftsWoche*.

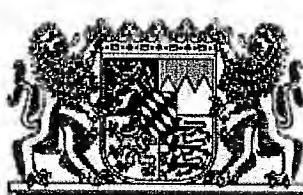
## Saving lives and money Infineon's X-Gold 101 Germany's hottest product

Infineon's X-Gold 101 has won 2009's Prize for Innovation in German Business – the most prestigious award conferred upon high-tech breakthroughs in the country. And for good reason. The chip's technology platform is going to save lives, save money – and create a whole generation of 'killer apps' (killer applications).

**Saving lives** – at least 2,500 a year, reports the European Union. The lives will be saved by E-Call. This 'black box' is set to be SOE (standard operating equipment) by 2012 in all automobiles in the Union.



Source Infineon



## Munich – best infrastructure in Europe, second best in the world

These are the findings of the 2009 Quality of Living study compiled by market researcher Mercer. The study used input from expatriates to rank the world's 215 leading cities.



Evaluated in the all-important infrastructure category were such parameters as reliability of electricity and water supply, quality and sophistication of telecommunications and postal services, extent and frequency of public transportation networks and links, level of stress from traffic, and number of international flights from local airport.

Munich's top-two placement in this category boosted it to a seventh place in the worldwide rankings of quality of life.

<http://www.mercer.com/qualityofliving>

## Prudence and patience pay off: Munich Re shows how to weather financial storms

"A strong year, with an even stronger one to come." Only a very few of the world's major financial service companies got to make that statement about 2008.

One of these very, very few is Munich Re, the world's largest and most successful re-insurer, which in 2008 recorded healthy profits of €1.5 billion and record gross premiums of nearly €38 billion. Own funds—the best indication of corporate solvency—also reached a record level of €21 billion.

And 2009 looks even better for Munich Re, which registered in the first quarter profits of €420 million. This and other results have caused CEO Nicholas vom Bomhard to forecast for the year as a whole further rises in his group's key indicators.

The question arises: what is Munich Re doing differently than other financial services suppliers in general?

**The answers, very simply, are 'prudence' and 'patience'.**

"We refrained from entering certain areas of business. Just because the music is playing loudly doesn't mean that you have to dance. We always remained aware that higher rates of return inevitably mean higher risks," stated vom Bomhard in a recent interview in weekly *Der Spiegel*.

In the interview, vom Bomhard detailed the barrage of criticism showered upon these policies of avoiding risks—"boring!" and "too conservative".

As he explains, the keystone of these policies is rewarding managers for long-term and sustainable achievements, and not for racking up great quarterly results by entering into high-yield, highly dangerous transactions. As vom Bomhard notes, these policies are motivated by the "great sense of the long-term responsibilities we have for the well-being of our policyholders, our staff members and our other stakeholders".

Vom Bomhard's sense of responsibility extends to the well-being of environment.

The strength of his commitment to first finding and then implementing ways of saving the climate won him in 2007 Germany's "Eco-manager of the year" award. This is conferred by the World Wildlife Fund and business magazine Capital.

### State-wide solvency

These policies of prudence and patience have been also been employed by a large number of other state financial institutions - with similar and positive results.

One of them: Stadtsparkasse München (SSKM). Munich's municipal savings bank registered a sterling year in 2008, with all indicators at record or near-record levels – including amount of new credit supplied and net deposits.

As SSKM CEO Harald Strötgen explains, his bank's successes stem from sticking to what it knows and does best: serving Munich's booming economy and the companies and consumers comprising it.

"We know our companies and we know our private customers. So we know which services to supply them with, and how much to give them," he concludes.

Such practices are the norm at Bavaria's 74 other savings banks, and at the state's 317 credit unions. And because they are, nearly all of these financial institutions also had good to excellent years in 2008.

## The youngest for the biggest Karl-Theodor zu Guttenberg: Germany's new economics minister

On February 10, 2009, the 37 year-old Karl-Theodor zu Guttenberg became the youngest person ever to be appointed Germany's economics minister.

Zu Guttenberg has been in ceaseless action since then, trying to put out the many fires burning in this time of worldwide recession. His drive and his ability to keep cool even in the highest pressure of situations have won him kudos with the media in Germany and in the world.

Guttenberg's qualifications for managing Germany's recovery were gathered in Bavaria. In 1994, von Guttenberg, a lawyer by profession, assumed a senior position at the helm of the Munich-based Guttenberg GmbH, the company holding the assets of his family, which is one of the oldest and most illustrious in European aristocracy.

The dynasty's seat is Bavaria's administrative district of Lower Franconia.



## Hot technologies Holger Braunschweig and his wonderful world of new materials

No one, not even Holger Braunschweig himself, is quite sure where his breakthroughs will lead. Everybody – and especially the jury conferring the Leibniz Prize – is, however, sure that their impact will be huge.

This certainty of belief led to the winning by Braunschweig, a professor of anorganic chemistry at the University of Würzburg, of a 2009 Leibniz Prize. Both its endowment - €2.5 million - and its prestige make the Prize the most important in German research.

The uncertainty as to his breakthroughs' impact stem from the nature of Braunschweig's achievement. Rather than synthesizing a single new material or a new application for an existing one, the scientist, who was born in 1961, has come up with an entirely new class of materials. These are compounds of boron and other organic materials with transitional metals.

These new compounds, in turn, could well be the building blocks of revolutionary new catalysts, polymers and other materials.

The lack of certainty as to the final use of Braunschweig's findings hasn't prevented him from being one of world science's most sought-after contributors and speakers. Since 2005, he has published more than 30 articles in leading journals of chemistry, and has given more than 50 lectures during the time.



## Bavaria in space GOCE gets a bead on gravity

Reiner Rummel's 20-year dream became a reality on March 16, 2009. On that day, the pan-European GOCE (Gravity Field and Steady-State Ocean Explorer) satellite was launched into orbit.



The head of the Technical University Munich's Institute for Astronomical and Physical Geodesy, Rummel had envisioned sending into space a satellite equipped with an ultra-sensitive gravity gradiometer.

Doing such would give humanity its most accurate view ever of the earth's gravitational field, and, thus of the forces shaping it. These include primarily the Earth's 'innards'. These, in turn, shape the circulation of the oceans and thus the workings of the climate.

Realizing this dream took twenty years of planning and implementing for the team headed by Rummel, the chairman of the GOCE Mission Advisory Group, and comprised of 10 institutes from seven countries.

His dream may have been fulfilled, but his work is by no means over: Rummel and his institute at TUM are participating in the compiling and evaluating of the data broadcast by GOCE in what is forecast to be a 20-month mission.



SOURCE EADS

## Innovation@home Twenty four for the world Bavaria's universities of applied sciences

None of them is older than 39. Most are located in small cities and towns. And, until recently, their main objectives were defined to be turning out engineers and other technical personnel so badly needed by employers.

Bavaria's 24 universities of applied sciences would appear to be unlikely candidates for worldwide technological renown.

But that in fact is the case. Whether it be in the fields of computer graphics, aerospace engineering, beer brewing, wood-based building or dozens of other cutting-edge sectors, the universities are worldwide technology leaders.

And that's because of the close working relationships they've entered into with state manufacturers and research institutes.

### More hot facts...

#### **Georg Simon Ohm/Nuremberg**

Many of the world's most exciting computer games and animation programs were developed by this hotbed of advanced media engineering and design.

#### **Rosenheim**

Located in the gracious southern Bavarian town of the same name, the Rosenheim University of Applied Sciences is one of the world's leaders in creating new applications for the world's fuel and oldest building material: wood.

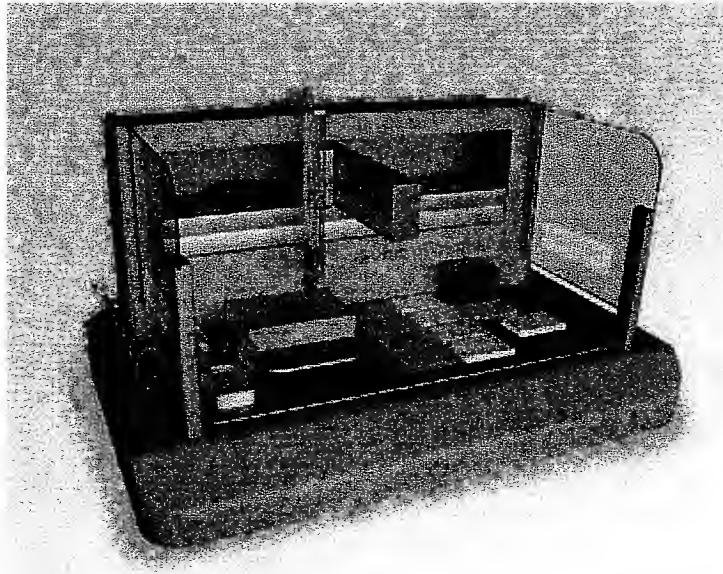
#### **Weihenstephan**

With its main campus located in the northern Munich suburb of Freising, and with others in Straubing and Triesing, Weihenstephan has long been a forerunner in the developing of better (more efficient, yielding higher quality products) agricultural technologies. Today, Weihenstephan is a major center of 'green' (agriculture-use) biotechnologiesstands.

## Nanion: speeding up the pharmaceutical pipeline

Bavaria's life sciences sector is thriving. One reason is that it is delivering the devices giving researchers new speeds, ranges and capabilities of drug discovery.

Prime among the state's enablers is **Munich's Nanion**. It has replaced pipettes with chips in 'patch clamp systems'. By doing so, Nanion has increased research throughput ten-fold, and has given the life sciences new methods of investigation.



The focus of Nanion's work are the pores in living cells. Going by the name 'ion channels', these tiny pores (70,000 of them have the diameter of a human hair) serve as the conduits for flows of ions in and out of the cells.

One of the key focuses of medical researches is using electrical current to detect how drugs are affected the flow of ions through these channels. Scientists used to conduct this research on a one-on-one-on-one basis—one pipette being applied to one cell at one time.

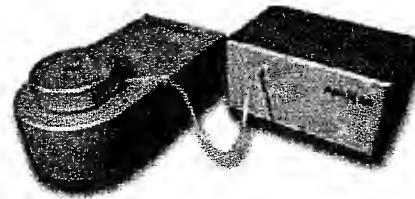
Since this involved a microscope and fine-tuning, it was a lengthy, often frustrating process.

Considering that a typical drug development project can involve testing up to one 2 million compounds, you can see why this research wasn't exactly fast-paced.

Enter Nanion's chip-based High Throughput Screening systems. The winners of numerous prizes, these use automation to impart vastly greater speeds, precisions and ranges of operation.

The heart of this system is a chip upon which several cells are placed using negative pressure.

## Nanion's business story



### Nanion's business story is as interesting as its technology one.

In 2001, CEO Niels Fertig, then a pre-doc at the Center of Nanoscience at Munich's Ludwig-Maximilians University, decided to realize his vision of spinning off his research. To do such, Fertig and his partners took part in the city's Businessplan Competition.

A year later, honed with the insights gained from this participation, Fertig started up Nanion. Since then, the company has accomplished two difficult feats. It has systematically upgraded its products and services, and has been profitable while doing such.

This makes it a rarity in the world of biotech, in which a company's early years are generally associated with "cash burning".

## More hot facts...

Of the 150 largest solar parks in the world, 16 are located in Bavaria.

In 2005, Bavaria alone accounted for one quarter of the PV facilities set up worldwide. In 2006, the number of PV facilities installed in Bavaria was larger than that of the USA and Japan combined.

About half of Germany's solar electricity facilities are located in Bavaria.

Held May 27 – 29, 2009 in Munich, Intersolar cemented its position of being the world's leading trade fair for the solar power industry, attracting some 1400 exhibitors. Occupying 100,000 square meters of floor space, these stands were visited by 60,000 people.

## From Bavaria: the next industrial revolution

Making robots see: MVtec

MV (machine vision) systems are going to revolutionize manufacturing. Such systems are comprised of industrial robots and image capturing and processing technologies.

Industrial robots are unexcelled at doing complex and repetitious tasks. That's why they were for a very long time the mainstays of assembly lines.



Such robots have, however, two grave flaws. They are blind and they are dumb. They lack the eyes and the intelligence to recognize and respond to such unexpected situations as variations in operations or components of inferior quality.

That's where human beings shine. And that's why many manufacturers have been deploying people instead of robots on such lines.

A number of companies have striven to solve that problem by coupling cameras to robots. The problem with their MV systems was that each involved a huge amount of proprietary programming. This programming, in turn, priced such systems out of the reach of many users.



Enter Munich's MVtec. Its Halcon standard software requires no extra programming, and enables the quick and problem-free creation of a full range of MV applications.

MVtec has also created ActiVisionTools. It is designed to meet the needs of SMEs (small and medium-sized enterprises).

These two software packages make MVtec a world technology leader in the MV (machine vision) field. The company was founded in 1996 and is headed by CEOs Dr. Wolfgang Eckstein and Dr. Olaf Munkelt.

## Regenerative fuels fuelled power plants

Bavaria doesn't have oil or natural gas. It is, however, abundantly blessed with another of fuel: wood.

The byproducts of its €1.5 billion-a-year lumber industry and of the downstream sectors using its products (furniture and construction) are turned, along with other organic materials, by **biomass power plants** into heat fed into district heating systems in

**Pfaffenhofen:** south central Bavaria

**Mark Schwaben:** greater Munich

**Hauzenberg:** eastern Bavaria

As befitting its largest-state-in-Germany expanse, Bavaria has a huge agribusiness sector. Its wastes are turned into **biogas** and then combusted at some 1350 facilities in the state.

The largest of these biogas power plants (and the largest in the world) was commissioned in May 2007 in  
**Pliening/Ebersberg:** greater Munich.

It may well be Bavaria's greatest source of clean energy, and it is invisible – at least unless you have a camera to slip down into a hole drilled anywhere up to 5,000 meters below the surface of the southern part (Alps to the Danube) of the state.

That's where the state's aquifer of geothermal water is located. Tapping its 30°C – 140°C heat are a large number of **geothermal energy stations**. With 90 fields in Bavaria either already being tapped or set for exploitation, these include

**Simbach:** eastern Bavaria: heat

**Unterhaching:** greater Munich:

heat and up to 3.4 MW of electricity

**Sauerlach:** greater Munich: (to be completed in 2009)  
 heat and up to 8 MW of electricity

**Munich:** located in the eastern Munich borough of Riem: heat

**Dürrnhaar/Aying:** greater Munich  
 (to be completed at the end of 2009) electricity

## Playmobil and the joys of ethical toys

Playmobil's toys are not associated with star wars or treks or bat or super men. Once put together, they pretty much stand around. Nor are they produced in China, Vietnam or other low wage countries.



Source: Playmobil

The only thing kids can do with the toys is to use their sense of imagination and play with them.

Sounds like a recipe for a business disaster. It is, in fact, quite the opposite. Headquartered in Zirndorf, a town in Central Franconia, Playmobil is indisputably one of the world's most sustainably successful toy companies.

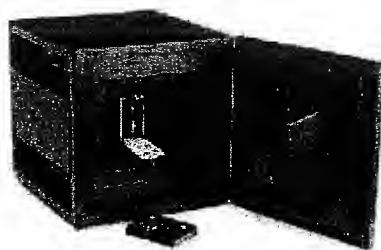
In 2008, a year in which many other large-sized toy companies were crashing and burning, Playmobil had sales of €452 million, up 6% over 2007. Playmobil's owner, the Brandstätter group, recorded a corresponding rise in sales of 8%, going from €459 million to €496 million – and creating 100 jobs in the process.

To assure high product quality, Playmobil's police officers, Viking chiefs and airports are manufactured in Germany and in fellow EU members Malta, Spain and the Czech Republic.

## Secumem: saving companies' most valuable asset

Based in Munich, Secumem has come up with the recession-beating product: vaults protecting hard disks against fires, floods, earthquakes and other disasters. Going by the brand name 'Threx', the vaults are coupled with sophisticated data backup systems.

**We're talking about the highest levels of security here.**



Worried about fires? Threx can withstand heat up to 1000°C. Worried about lightning bolts? Threx can handle up to 250,000 volts. Worried about break-ins? Threx isn't fazed by crowbars or hammers. Worried about earthquakes? Threx can withstand up pressures up to 100 kN.

The winner of 2008's Munich Business Plan competition, Secumen was founded at the beginning of 2007 by Adriana and Dirk Brunner.

As they point out, the reason why Secumen can guarantee such a high level of quality is the company's policy of procuring supplies from producers based in the Munich region.

More than four fifths of the 500 parts going into a Threx are manufactured by producers in greater Munich.

## Playmobil's story of success

**These results set forth a remarkable if somewhat twisting story of success.**

Founded in 1876, Brandstätter started out producing locks for caskets. The company then branched out into metal goods and then, after World War II, into telephones and piggy banks.

The company produced in the late 50s its first toy—the Hula Hoop. In the 1970s, competition from low-wage countries and the rising price of plastic (caused by the oil crisis), forced Brandstätter to cast about for a new money-earner.

It was then—in 1974—that Hans Beck, the company's chief designer, finalized his idea of creating little figures coming equipped with the appropriate settings.

It took a lot of grit on Beck's part to first convince his boss Horst Brandstätter to give his brainwave a try. It then took Brandstätter lots of hard selling and a few ingenious ploys to convince the toy world that Playmobil was the coming thing.

## Key figures

**75,000.** That's the number – the largest of any state in the world – of producers of solar electricity feeding into e-On Bayern's grid. This, in turn, serves three quarters of Bavaria's surface area – meaning that the actual figure could well be up to 100,000.

Bavaria's producers of solar electricity range in size from families which have placed small-sized photovoltaic (PV) panels on their houses' roofs to the €15 million solarpark in northwestern Bavaria's Erlasee/Arnstein.

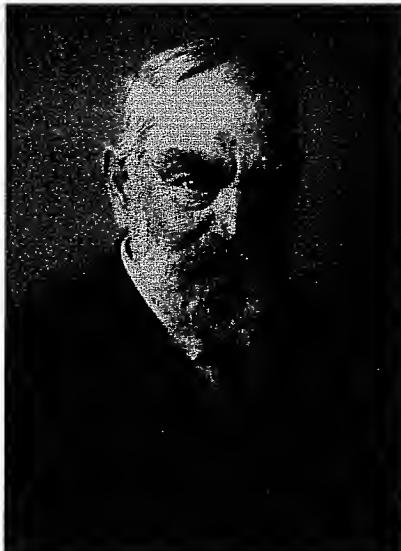
Its output is 12 megawatts – the largest in the world. All told, the state's solar producers generate as much electricity as three coal-fired power plants.

## Making their mark: Bavarians who built Bavaria

### Oskar von Miller:

#### switching on the entire world, and putting the entire world in a museum

The world owes a lot to Oskar von Miller. Like its electricity grids. Like its ways of producing and storing electricity. And like the museum showcasing these and all other technological innovations.



Oskar von Miller was born in 1855 in Munich. After earning a degree in engineering at today's TUM (Technical University Munich), he devoted himself to advancing the use of electricity.

With path-blazing results. In 1882, von Miller managed a feat which turned electricity from a plaything of technology fans into the world's main source of energy: he set up the world's first long-distance (the 57 kms from Miesbach to Munich) transmission line.

Von Miller didn't stop there. After building Germany's first power plant in 1884, he worked on developing ultra-high capacity and long distance power lines - successfully. In 1891, one of his power lines transmitted 20,000 volts of three-phase alternating current.

This breakthrough made AC the world's standard, and served as the cornerstone for electricity grids around the world.

Von Miller's passion for developing electricity led to him to achieve a large number of other significant electricity - related achievements, including the building of what was at the time the world's largest hydraulic power plant.

But the achievement for which he is best remembered had to do with another passion: collecting innovations.

On May 7th, 1925, on von Miller's 70th birthday, and after 22 years of collecting, fund-raising and building, his greatest dream came true - of amassing in one building all of the technological breakthroughs made by humanity over the ages.

It was on that day that the Deutsches Museum was commissioned.

In view of von Miller's objective, it's not surprising that the new building and its collection were large - very large. Today the museum's 55,000 square meters of space are home to 20,000 objects of exhibition. All told, its collection has 100,000 such objects. And its peerless library has 900,000 of the world's most important manuscripts of scientific endeavor and achievement.

These figures make the DM the largest single-building museum of technology in the world. The Smithsonian is larger, but is comprised of 16 individual museums.

### von Miller's legacy: reliable electricity

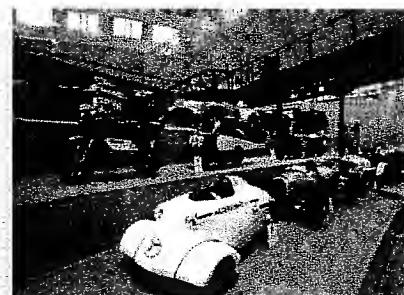
Thanks to von Miller and his successors, Germany has one of the lowest rates of power outages in Europe and one of the lowest in the world. Outages average 22 minutes per customer per year, reports the Association of Bavaria's Electricity Industry. Comparable figures for France, the UK, Spain and the USA: 51, 61, 118 and 214 minutes.

### Deutsches Museum's two offshoots

To making taking in its exhaustive and sometimes exhausting collection a bit more doable, the DM spun off two of its collections into museums of their own:

#### The Transportation Center

Located in the spacious, Industrial Age buildings once housing Munich's trade fair grounds, the Center has many of the DM's most enduring 'hits' with young and old: 19th century trains and 20th century cars, buses and trams.



#### The Aerospace Museum

Located in the northern Munich suburb of Ober-schleißheim, the museum has a Smithsonian-like collection of aircraft, rockets, helicopters and much more.



## Places to know, places to go in Bavaria

### Deutsches Museum and its two offshoots in Munich.



Each year, some 1.4 million people visit the DM - and that's not just because of its mind-bogglingly large and fascinating collection.

It's also because of its location, on an enchantingly green island in the Isar River (keep an eye out for the beavers who are now residing there!), and within a short walk from Marienplatz and the rest of downtown.

It's also because of Kid's Kingdom, located in the museum's bottom floor and 1,300 square meters of hands-on fun for children up to 8 years of age.

Re the collection: there are two things of which you can be sure.

**1.** It has an exhaustive and enchanting exhibition on anything you are interested in, no matter how arcane, including medieval medicine making and alchemy, state-of-technology satellite navigation systems, windmills through the ages, and early rockets, computers and microelectronics chips.

**2.** You will always get sidetracked while making your way to interest of choice. Who can resist a glance at Viking ships or wraparound views of the universe? Who doesn't want to try their hands at the fiendishly complicated but oh so simple-looking games on the fourth floor?

The Deutsches Museum is open every day (except for eight days during the year) from 9 am – 5 pm. [www.deutsches-museum.de](http://www.deutsches-museum.de)

### Buttenheim



One billion pairs of blue jeans are sold every year. Five billion are found in the world's closets. All of these are the products of a single, brilliant idea - of using upholstery fabric for work clothes - which flashed in 1873 into the mind of a 44 year old immigrant to the USA from the northern Bavarian town of Buttenheim.

The immigrant was of course Levi Strauss. His house of birth has been turned into museum detailing the life and times of Strauss and his family. If you're serious, very serious about jeans, this is the place to go.

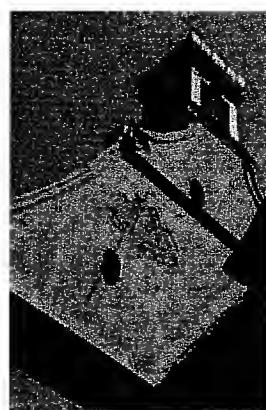
[www.levi-schiff-museum.de/](http://www.levi-schiff-museum.de/)



### Augsburg's Fuggerei



The Fuggerei is every modern urban dwellers' dream: low rents (88 cents a year) and traditional architecture (pretty much unchanged from its year of building in 1523) in a gated and walled community (gates are locked from 10 pm to 5 am) located in the heart of one of Europe's most beautiful cities: Augsburg.



The Fuggerei's rents and affirmative action policies (its 150 residents are proactively recruited among the aged, afflicted and impoverished) also make it the role model for every crusader for social justice.

Odd that this template for social care should have been built by one of the most grasping capitalists of his (or any) time: Jakob Fugger (1459-1525), scion of the fabled banking dynasty.

Odd - and ironic - that the best known remnants of the House of Fugger's fabled wealth are these 140 dwellings for the poor. [www.fuggerei.de](http://www.fuggerei.de)

## Cool bikes from Bavaria

**Want to bike in style down Bavaria's bikeways?  
Get a Ghost or Corratec bike.**



There are important similarities between BMW's cars and Ghost bikes. They are largely made (designed, engineered and manufactured) in Bavaria. Their names are thus synonymous with ultra-high performance and quality.

Besides the fact that one of these companies does not include engines in its products, there are, however, a couple of important differences.

Whereas BMW is one of the world's most easily recognized trademarks, Ghost Bikes are known only to a relatively small circle of bikers.

Although that's now changing, thanks to what happened in Beijing in 2008. Riding a Ghost bike, Sabine Spitz won the gold medal in women's mountain biking.

## B&B: in Bavaria, it means "bed and biking"



116 routes and a total length of 8700 kilometers: Bavaria has, indisputably, the largest grid of bikeways of any region in the world.

One reason for the grid's size: Bavaria is by far Germany's largest state.

One reason for its popularity: on these routes are Bavaria's world-famous castles, pristine lakes, rippling rivers and picturesque cities.

Another reason for the bikeways' popularity: the 800 certified B&B (bed and bike) hotels, pensions, camping grounds and hostels lining them.

According to the Bavarian chapter of ADFC (association of Germany's cyclists), these B&Bs range in luxuriousness from four-star hotels devoted to pampering cyclist and cycle in every conceivable way to "hay hotels" – barns offering bikers a very immediate way to get back to and into nature.

These B&Bs join with the following routes in explaining why Bavaria was voted Germany's best place to bike in the 2009 edition of ADFC's annual poll of bikers.

### Cool Bikes



#### Ghost Bikes

Located in Waldsassen, a town in the Bavarian Forest, Ghost Bikes was founded in 1993. Since then, in a perfect example of the unwavering pursuit of excellence producing strong business results, the company has grown steadily. It now employs 90 staff members. Its bikes are sold in more than 20 countries.



#### Corratec

Equally admired in the world of cycling, Corratec is headquartered in the southern Bavarian town of Raubling. It produces a full range of high-end road, mountain trekking and kids' bikes.

## Favorite routes

### Ride alongside the rivers

The routes running alongside the Danube, Altmühl, Inn and Main are some of the world's most popular, and it's easy to see why.

They are, by and large, flat. They make it impossible (well, very difficult) to lose one's way - just keep the river to your right or left. They offer instantaneous cool-offs and freshen-ups whenever so desired.

They also offer quick-changes of types of sport. If you want a break from cycling, rent a canoe or rowboat and take to the river. If you want to stretch your legs, what better place to do it in Passau, Landshut, Eichstätt or any others of the literally hundreds of scenic cities lining the rivers and their routes?

### Ride for romance

It is one of the most more picturesque and - well - romantic sights Europe has to offer. You cycle to the top of a promontory. Materializing before your eyes is a perfectly-preserved medieval town, complete and replete with turrets and towers and city gates. We're talking about Rothenburg ob der Tauber, Dinkelsbühl and the other favorites with the world's tourists linked by the Romantic Route.

It, in turn, runs the length of western Bavaria, junctioning at its southern end with two other hits with cyclists.

### Cycle-seeing in and around Füssen

Bavaria's King Ludwig II spent much of his childhood in Füssen's Hohenschwangau castle. He liked the area so much that he decided to build a castle of his own there: Neuschwanstein.

The two castles form the starting and ending points of an 80 km route taking in the churches, villages and lakes (including the majestic Forggensee) forming, along with the mighty Alps to the immediate south, the landscape so loved by Bavaria's beauty-crazed king.

### Mighty in the mountains

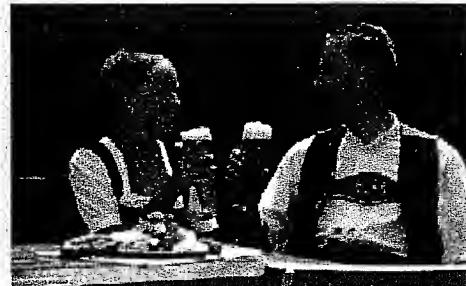
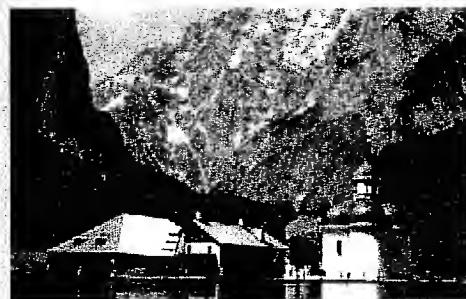
Füssen is also a major stop on the Lake of Constance - Königssee (Lake of Kings) route, which is reportedly the longest (418 kms) and one of the most challenging in Bavaria. That's because it runs alongside (and sometimes through) the Alps.

Equally challenging and nearly as long is the route paralleling the Bavarian-Czech border. For most of its length it goes by the name "Green Roof" route. The 'green' and the 'roof' is a reference to the Bavarian Forest, whose wooded heights (up to 1456 meters) this route traverses.

### Here to fare

Other favorites take you to (but not necessarily out of) Munich's beer gardens, Upper Franconia's breweries and lower Franconia's vineyards and route-side inns.

For further information:  
[www.bayernbike.de](http://www.bayernbike.de)



## New and newsworthy

### Israel is number 20!

Bavaria and Israel have a close relationship, with more than 1,000 of the state's companies doing business in the country. Of these companies, no less than 350 have set subsidiaries, offices or working relationships in and with Israel and its businesses.

On March 24, 2009, that close relationship got a bit closer. On that day, the state of Bavaria opened its office for Israel in Tel Aviv. It is the twentieth in the state's world-spanning network. The office is headed by Godel Rosenberg, a seasoned veteran of international business.



### Munich: Germany's number one IT market

€3040 per employee per year. That's how much Munich's companies spend on IT. This makes Munich's business community the biggest IT spender among Germany's 429 cities and counties, reports a study published in March 2009 in Computerwoche.



### The Allgäu does it again!

A few months ago, it was America's AGCO which made a hundred million euro investment in the southwestern Bavarian region of the Allgäu. This time, it's Nestlé's turn. The Swiss food giant, the largest in the world, is going to spend €108 million to expand its baby food production facility in the eastern Allgäu town of Biessenhofen.



### Bavaria's Quality Prize 2009:

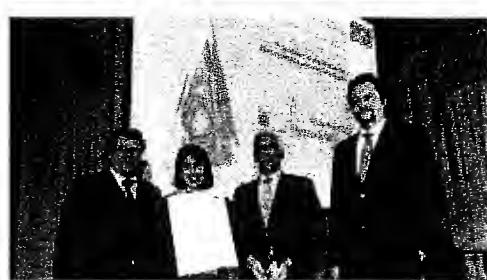
#### three winners, one ultra-high standard of quality

It may be the toughest award to win in Bavaria—the state's Quality Prize. And that's because the competition is so great. There are simply so many companies in the state manufacturing products which are worldwide benchmarks for performance.

This year's winners were:

#### - MANN + HUMMEL

Located in Marklkofen, Lower Bavaria, the company is a producer of filter and suction systems and plastics-based components for the automotive and industrial engineering sectors.



#### - KSB AG

Headquartered in Pegnitz, Upper Franconia, KSB manufactures armatures used in the industrial engineering sector

#### - MTU Aero Engines GmbH

The Munich-based MTU is Germany's leading manufacturer of aircraft engines and the world's number one supplier of related maintenance services



### Inventions the world has been waiting for:

Researchers at TUM (Munich's University of Technology) have eliminated one of humanity's biggest time-wasters: the "it won't come out" ketchup bottle. Their bottle is made out of a new kind of glass. It is so smooth that it serves as a slide zooming the ketchup out of the bottle and on to your hamburger!

## Bavaria goes abroad: trade fairs and business trips

Bayern International, Bavaria's international business development arm, is facilitating the following trips in 2009.

Delegations headed by Martin Zeil (Bavaria's economics minister) or by Katja Hessel (state secretary)

### Business trips:

**Eastern Russia**  
industrial engineering  
July 15 – 24

**Kiev, Ukraine**  
construction  
autumn

### Delegations:

**India**  
**(Delhi, Chennai, Kolkata)**  
October 25 - 31  
Registration by July

**Cuba and Columbia**  
November 1 - 8

**Poland (Cracow, Lodz, Poznan)**  
November 25 - 27



### For further information:

Bayern International  
Ms. Agnieszka Eckert  
aeckert@bayern-international.de  
www.bayern-international.de  
+49-89 660 566 301

## At your service Trade fairs in Bavaria July 1 – September 30th, 2009

### Trade fairs in Munich:

#### BIKE Expo

Leading trade fair for the bicycle industry  
July 23-26, 2009  
www.bike-expo.com

#### DRINKTEC 2009

Beverage and liquid food technologies  
September 14-19, 2009  
www.drinktec.com

### Trade fairs in Nuremberg:

#### Fach Pack

Packaging technologies  
www.fachpack.de

#### Print Pack

Printing and production of packagings  
www.printpack.de

both September 29 – October 1, 2009



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## Contact

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### Invest in Bavaria

Bavarian Ministry of Economic Affairs,  
Infrastructure, Transport and Technology

Prinzregentenstr. 28

80538 Munich | Germany

Tel.: +49 89 2162-2642

Fax: +49 89 2162-2803

[www.invest-in-bavaria.com](http://www.invest-in-bavaria.com)

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**What's inside****From Bavaria:**

- world's largest environmental project
- world's most promising anti-cancer medication
- green tech for the Global Green Recovery
- no recessions for Bavaria's world champions

These big plans come with a big price tag – €400 billion. This will be shared by the consortium's members, which include, in addition to Munich Re, such other Bavaria-headquartered companies as Siemens and Schott Solar.

Desertec's plans strive to capitalize on one of the world's greatest unused assets – the sunlight baking the world's deserts.

As the Desertec Foundation points out: "Within six hours, deserts receive more energy from the sun than humankind consumes within one year."

The 'green electricity' produced by Desertec's solar thermal plants (in which banks of mirrors concentrate the sun's light into a blindingly hot beam turning water into steam) is going to vastly reduce the world's output of greenhouse gases. The project will thus counter climate change.

Important though it is, this thrust is just one of several key reasons for the consortium's undertaking the projects.

**Others:**

- to give Africa's economy a huge shot in the arm, and to make the continent a center of advanced renewal energy technologies
- and to thus stem the tide of illegal migration by giving Africans what they need and want most: jobs – at least 600,000 of them
- to give the industrialized world a sustainable, affordable and reliable source of power

**Bavarian companies participating in the Desertec Industrial Initiative**

**Munich Re** (Munich) coordination and financial expertise

**Schott Solar** (Mitterteich) receivers

**Siemens** (Erlangen) transmission lines

[www.desertec.org](http://www.desertec.org)

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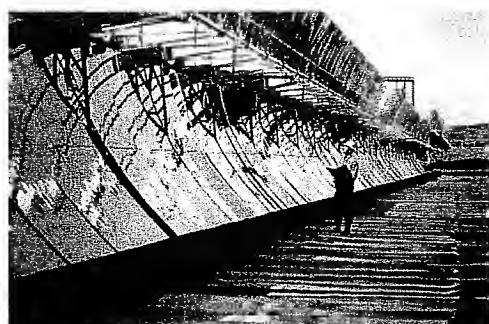
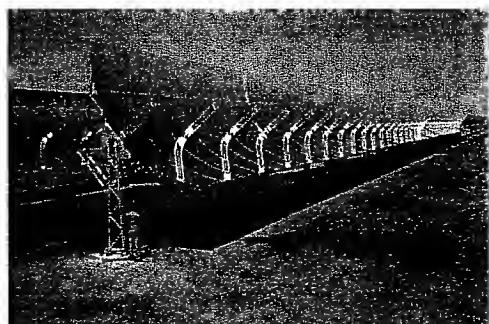
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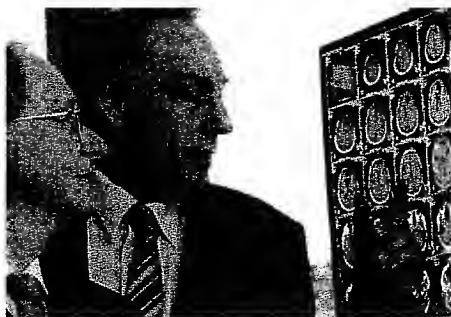
## The world's biggest environmental project Being put together in Bavaria: €400 billion solar Sahara project

Ten years from now, 15% of Europe's electricity is going to come from solar power plants stationed in the Sahara.

These plants and the power lines transmitting their electricity will be set up by the Desertec consortium, whose setting up on July 13th in Munich was lead managed by Munich Re, the world's largest reinsurer and a major and effective proponent of environmental improvement.



## The world's most promising medication for one of the world's worst cancers



A medication created by Regensburg's Antisense Pharma to treat fast-growing brain tumors (reported on in BB 1) proved smashingly successful in Stage IIB tests.

These results caused a Phase III study, going by the name "Sapphire", to be launched in April 2009. No less than 70 hospitals

and other centers of medical treatment are involved.

Being tested is trabedersen. This bioengineered antisense molecule destroys the shield protecting cancer cells, thus enabling the body's immune system to detect and destroy the tumor.

The success shown by trabedersen in inhibiting the production of TGF-beta 2, the factor facilitating the creation and protection of tumors (glioma and glioblastoma), has caused the commencing of Phase I and Phase II trials on such other malignancies as those of the pancreas and skin.

Antisense was founded in 1998 by Karl-Hermann Schlingensiepen, one of Germany's leading tumor researchers, and by three other members of his family.

## Life sciences in the Munich region Case study: Mikrogen

### Twenty years of creating products which the world needs: tests for HIV and other grave illnesses

Mikrogen was Munich's first biotech.

It was founded in 1989 by Manfred Motz and Erwin Soutschek to capitalize upon a breakthrough created in the laboratories of Munich's Max Pettenkofer Institute (itself part of the city's Ludwig Maximilians University): a system based on bioengineering antigenes extracted from bacteria to make them capable of quickly and precisely testing for pathogens.

The system went on to become a leading product.

Today, Mikrogen's antigen-based products are also used to detect such other grave diseases as hepatitis and the Epstein-Barr virus.

The company has gone from being two people working in a 60 square-meter large 'minilab' to 110 staff members occupying a modern facility in southern Munich.

The secret of the company's longevity and success? According to Erwin Soutschek, it was a paucity of capital.

"Since we didn't have huge reserves of funds, we were forced from the very outset to earn money," he explained. This need to generate income led the company to offer such services as the production and purification of recombinant and lysate antigens.

## Bavaria's life sciences community:

### key facts, figures and forecasts

#### Total turnover:

€10.5 billion in 2008  
(up 74% over 2005 for the region's SMEs)

#### Total workforce:

30,000

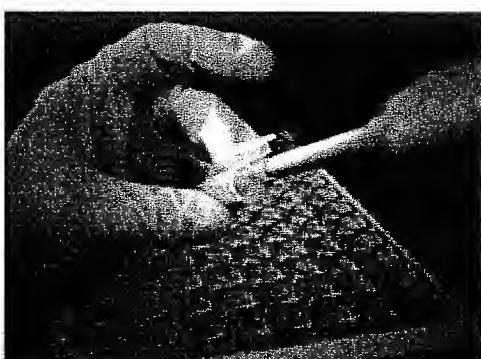
#### Working for

150 biotechs  
55 pharmaceuticals  
53 CROs (commissioned research organizations)  
127 suppliers, wholesalers and others  
8 top research institutes

#### Key facts:

50% of Germany's new medications stem from Munich's life sciences community

60% of Munich's life sciences companies are experiencing further growth in 2009



## From Bavaria's life sciences sector: breakthroughs which the world has been waiting for

**Chromobodies flashing live broadcasts on medications' effectiveness in cells**  
**Chromotek, Planegg**

Given the ability to fluoresce –and the smallness enabling them to slip into living cells.

These two traits have transformed the development of new medications from a black box, in which large-sized antibodies were set loose on dead cells and the results were interpreted in a variety of indirect ways, into a glass 'broadcast studio'.

This bit of bioengineering wonder was worked by Chromotek's CEO Dr. Ulrich Rothbauer, who, as he says, „fused the antigen-recognizing fragment of heavy-chain antibodies extracted from camels with fluorescent proteins“.

ChromoTek was founded in 2008, and has since won five major awards for startups and technologies.

### **Computer-based simulation and training programs for surgeons**

#### **SurgicEye GmbH, Munich**

Surgeons are about to get a tool which airplane pilots have availed themselves of for many years: ultra-detailed 'real life' simulation programs. These programs will enable surgeons to rehearse such complicated operations as the removal of brain tumors.

The programs will also train surgeons in the use of computer-conveyed images in surgical procedures.

The programs are being developed by SurgicEye, which was founded in 2008 by Thomas Wendler and Joerg Traub, two young scientists.

### **Cell cultures simulating microtumors**

#### **Spherotec, Munich**

The more and the more variegated tumors you test them on, the better you know whether a new drug is capable of treating cancer.

This truism led Barbara Mayer and Ilona Funke to create a technology capable of rapidly spawning a large number and variety of spherical cell cultures (hence the company's name) highly similar to cancers.

Maintained in a proprietary bank, these cultures are vastly shortening drug development, profiling and application procedures, as they permit the use of MP (massively parallel) methods.

Spherotec was founded in 2006.

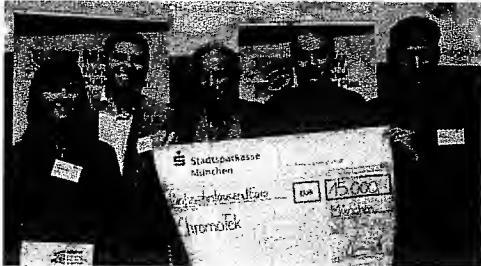
### **Contact Life Sciences**

Benjamin Emans

benjamin.emans@invest-in-bavaria.com

+ 49 89 2162-2209

You can literally see them go about their business of detecting and destroying invaders in cells. That's because chromobodies have been given the ability to fluoresce –and the smallness enabling them to slip into living cells.



## From Bavaria, green tech for the Global Green Recovery

By 2020, the world will be spending €3.1 trillion every year on the GGR – global green recovery, reports a major study released in May by Germany's environment ministry and compiled by management consultants Roland Berger.

Major beneficiary of the world's push to remediate all of the many problems afflicting its environment will be Germany's world-largest green tech industry, which is accordingly forecast to experience a doubling of revenues – to €400 billion – by 2020.

Driving force within Germany's industry is Bavaria, whose green tech companies are the leaders in turning mobility, energy generation and use, and manufacturing into forces remediating the environment.

In addition to Munich and Nuremberg, two communities which are at the center of the green tech movement are Straubing and Augsburg.

### Straubing: if it's organic, it's a fuel!

Everything organic is a valuable fuel, be it waste cooking lard or mown weeds or sewage sludge.



You just have to find a way of efficiently extracting and utilizing its energy.

That's the approach taken by the renewable fuel experts staffing the institute and technology and incubation center located in the eastern Bavarian city of Straubing.

By developing the dedicated equipment and the procedures and supplies requisite to using it, the experts have turned using renewable fuels into a very precise science – and a very big business.

The experts' manuals, charts and position papers help policy-makers, farmers and entrepreneurs enter and succeed in the business of turning regenerative fuels into green energy.

[www.konaro.bayern.de](http://www.konaro.bayern.de)

### Augsburg: and climate protection takes flight



Environmental protection has a new buzz acronym: CFC.

It stands for "carbon fiber composites".

The reason why environmentalists are so excited about CFCs is that they team up two winning traits.

They are ultra-light and ultra-strong – 30% lighter and up to five times stronger than steel.

These traits have led to CFCs being widely used anywhere where fuel efficiency is mission critical – in space craft, racecars and airplanes.

Less weight = lower emissions and thus less environmental impact. This equation is motivating the ever-growing use of CFCs in aircraft and cars.

CFCs have other environmentally-friendly traits. They can be engineered to be impermeable to heat, thus making them ideal for use in energy-conserving doors and window frames.

Augsburg is a center of world development of CFCs. That's partially due to its industrial tradition.

MT Aerospace and Premier Aerotec (EADS group), two of Germany's leading suppliers (for the ARIANE launcher, Airbus, A400M, Typhoon and Tornado programs) of aerospace systems and components, maintain extensive production facilities in the city.

To further the development of deployment of CFCs, Premium Aerotec, in fact, is building in Augsburg a €140 million "high-tech factory". Completion date: 2011. This factory will employ the VAP (vacuum assisted process) technology developed by Premium Aerotech. It cuts times of production of plastic-based components by 20%. VAP also reduces the consumption of energy.

The CFCs which these companies incorporate into the aerospace systems and subsystems which they manufacture stem from such nearby suppliers as SGL Carbon.

This weight of CFC-related activity led to Augsburg's being selected in 2007 as the headquarters for the new Carbon Composites e.V.

[www.carbon-composites.eu](http://www.carbon-composites.eu)



Members of this center for the development of CFC-related technologies are 87 leading research institutes, manufacturers, suppliers and systems engineers.

Another reason for locating Carbon Composites in Augsburg is the city's unparalleled track record of creating new environmental technologies. A number of these have been shaped at the city's dedicated incubation center.

Name to know: ZAE Bavaria



Founded in 1991 and headquartered in Würzburg, Bavaria's Center for Research into Applications of Energy (the translation of its German name) is a leading source of innovations in the areas of energy storage, conservation and generation technologies.

[www.zae-bayern.de](http://www.zae-bayern.de)

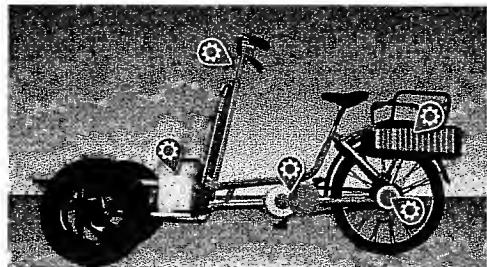
## Five Bavarian green tech start-ups to watch

### Clean Mobile AG, Unterhaching (founded 2006)

#### Fuel cell-powered small vehicles

The first company in the world to solve electrical vehicles' most pressing problems: the lack of capacity of lithium-ion batteries. The company's answer: an on-board DMF (direct methanol fuel cell) generating the electricity needed to keep the batteries charged.

Clean Mobile's drive trains will be incorporated into scooters, wheelchairs, E-bikes and other light vehicles

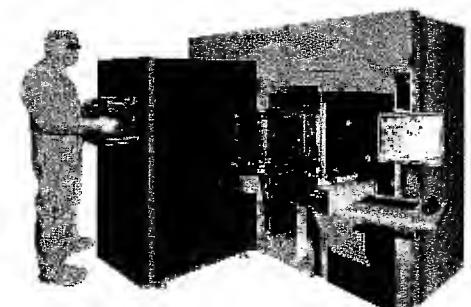


### Nanda Technologies, Munich (founded 2006).

#### No-waste semiconductor manufacturing processes

The semiconductor industry produces the brains of TIME (technology, information, media and entertainment industry) equipment and of PV (photovoltaic) systems. That's why semiconductors are one of the largest sectors in the world.

And, unfortunately, one with a great and deleterious impact on our environment.



Nanda's inspection systems solve one of semiconductors' worst environmental problems: the high rate of defective chips ensuing from the production process. Chips are, after all, full of toxic, hard-to-recycle materials.

The systems detect flaws in the operations of the lines producing chips. By doing so, they not greatly lower the rate of chips rejected. Nanda's systems also vastly increase the efficiency of production operations.

### a + f GmbH, Würzburg (founded in 2004)

#### Solar tracking systems

Each day, the sun moves from east to west across the sky. Devoted to turning the sun's light into electricity, photovoltaic modules do not have the capability of following the sun's movement. Because of this, they fail to capture about 30% of the energy available.

Enter a + f's SunCarrier, the world's most advanced solar tracking systems. They enable the modules to pivot and swivel, thus ensuring them of always facing the sun in an optimal way.

### ClimatePartner, Munich (founded in 2006)

#### Telling companies how to be good environmental citizens

Say "corporate-level environmental protection" and most people think of producers cutting their emissions into the ambient environment.

In actual fact, service providers and agribusinesses often have the greatest potential of reducing their environmental footprints.

Munich's ClimatePartner is a leading expert in showing companies how to realize this potential and to thus achieve sustainable growth. It does such by developing in-depth and all-encompassing systems for such areas as wine production and distribution, hotel and event management.

### Windpower GmbH, Regensburg

Windpower was one of the companies which has made Germany, although 61st in size among the world's countries, number one in terms of windpower output.

Windpower has been planning, building and securing financing for windpower facilities since 1995. To date, Windpower has facilitated the development of 12 major-sized facilities. Most of these are located in Regensburg and vicinity.

## Read all about it!

### A portal for clean energy

Founded by a thinktank based in the northern Munich techburb of Garching, [www.cleanenergy-project.de](http://www.cleanenergy-project.de) is a portal providing the latest news and in-depth briefings on ways to produce and employ energy without harming the environment.

Behind the portal are leading ecologist Dr. Maike Winter, a protégé of Al Gore, and the GlobalCom PR Network communications agency.

In addition to articles on energy-related issues and on innovations helping to solve them, the portal also reports on events and educational programs in the field.

A large portion of Clean Energy's input stems from its network, which is comprised of entrepreneurs, scientists and policy-makers based around the world.

### Contact Energy | Environment

Kristine Forster

[kristine.forster@invest-in-bavaria.com](mailto:kristine.forster@invest-in-bavaria.com)

+ 49 89 24210-7510

## No recessions for Bavaria's world champions

Forget complicated business plans and implemental strategies.

Bavaria's world champions have a very simple approach to business.

They make  
products which work.  
products which do things no others can.  
products which are thus best-sellers on their market.

Bavaria's world champions include

**Giesecke & Devrient**

**Kathrein**

**Krones**

### **Giesecke & Devrient: safest money and smartest cards**

**Headquarters:** Munich

**Founded:** 1852

**CEO:** Dr. Karsten Ottenberg

#### **Top products:**

**banknote manufacturing and printing services and systems** – more than 100 currencies are produced by G & D or manufactured using the company's equipment and supplies

**debit, credit, mobile telecommunication, authentication and other kinds of smart cards**

**governmental solutions:** passport and visa production, inspection and reporting systems and services

#### **New and hot:**

**magnetic line scan cameras absolutely ensuring the authenticity of banknotes and providing ultra-accurate identification of defects in oil and gas pipelines and other industrial systems**

**cryptographic modules authenticating users of smartphones**

#### **self-service kiosks producing payment cards**

**Key figures:** in 2008, sales of €1.7 billion, profits of €111 million, a workforce of nearly 10,000 (all three are all-time highs)



### **Krones AG: machines bottling the world's beverages**

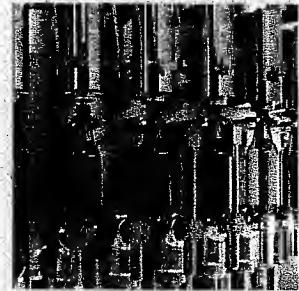
**Headquarters:** Neutraubling

**Founded:** 1951

**CEO:** Volker Kronseder

#### **Top products:**

**world leader in labeling machines for the food processing industry, in bottle inspection facilities, and in beverages filling and packaging systems;** materials processing facilities for the chemical and health care sectors, plant planning services



#### **New and hot:**

**A machine producing the world's lightest PET bottles, with all the accompanying savings of energy and materials**

**Key figures:** in 2008, consolidated sales of €2.4 billion and new orders of €2.3 billion, 10,333 employees (all three are all-time highs)

### **Kathrein-Werke KG: the world's ears to the skies**

**Headquarters:** Rosenheim

**Founded:** 1919

**CEO:** Anton Kathrein



#### **Top products:**

**antennas, receivers and transmitters for mobile communication systems, satellites and for broadcasting grids – 4,500 products all told**

70% and 45% shares of world market for UMTS and GSM-use antennas

#### **New and hot from Kathrein:**

**RFID-based tracking systems used in freight forwarding**

**DVBT (digital video broadcasting – terrestrial) transmission and receiving systems**

**Business figures** Business figures of €1.3 billion: turnover in 2008 of € 1.3 billion (all-time high), workforce of some 6100

## A state of culture

**Teaming ups enriching international culture  
Expat cultural luminaries and Bavaria's performing arts troupes**

**Mariss Jansons (Latvia)** conducts the Bavarian Radio Symphony Orchestra.

**Kent Nagano (United States)** conducts the Bavaria State Opera Orchestra.

**Nikolaus Bachler (Austria)** is the director of the Bavaria State Opera.

**Jonathan Nott (United Kingdom)** conducts the Bamberg Symphony.

**Ivan Liska (Czech Republic)** is the director of the Bavarian State Ballet.

**Martin Kusej (Austria)** is the director of the Bavarian State Theater.

Bavaria has some of the world's most celebrated orchestras, ballets, theaters and other cultural groups.

These are led by some of the world's most celebrated conductors and artistic directors.

The question arises:

are the stars responsible for making their troupes so celebrated, or did the troupes' fame draw the stars?

The answer is 'probably both'.

Case-in-point: Mariss Jansons and the Bavarian Radio Symphony Orchestra.

Founded in 1949, the BRSO was named in 2006 "one of the world's ten best orchestras" by authoritative trade magazine Gramophone.

Its conductors-in-chief have included the internationally-renowned Rafael Kubelik (Czech Republic), Kirill Kondrashin (Russia), Sir Colin Davis (UK) and Lorin Maazel (USA).

They molded the orchestra into a world-class ensemble.

The final steps to best-in-the-world rankings were undertaken under the leadership of Mariss Jansons, who was born in Riga in 1943 and who capped his twenty years of being one of the world's foremost conductors by assuming the helm of the orchestra in 2003.



## Names to know

### The Bavarian Finance Center

BFC was founded in 2007 to network all of companies, institutes and agencies comprising Bavaria's puissant financial community, to provide these players with access to the resources (qualified staff members, new dedicated software, information on regulations and innovations) which they require to develop their businesses, and to give them a conduit for their positions.

Headed by co-presidents Professors Dr. Wolfgang Gerke und Dr. Elmar Helten, and by CEO Dr. Felix Breuer, the BFC stages to that end the Bavarian Financial Summit on an annual basis. Although young (two years old), the Summit has already established itself as a closely-followed forum on current economic trends.

[www.bfz-ev.de](http://www.bfz-ev.de)

### Contact Financial Services

Regine Hutterer

[regine.hutterer@invest-in-bavaria.com](mailto:regine.hutterer@invest-in-bavaria.com)

+ 49 89 24210-7508



### Manching: Europe's largest military aviation center



Mostly very quiet, sometimes very loud, and always the largest.

That's the in-a-nutshell description of EADS' military aviation development center in Manching.

Manching is a central Bavarian town of 12,000. It's located right next door to Ingolstadt, whose fame stems from its being home to car manufacturer Audi.

In 2006, EADS, which is the world's largest aerospace company, decided to invest €100 million in grouping its Military Air Systems operations – components – for the development, production, testing and maintenance of aircraft and their components – at its 700,000 square meters large center in Manching.

The decision created the largest facility in Europe in this field. Manching's facilities employ 5,500 persons and have annual revenues of €2.3 billion.



Since then, things have been very quiet in Manching. And that's because putting together military aircraft is a hushed and hush-hush affair, in which technicians very quietly and efficiently go about their business of carrying out the up to 12,000 steps required to create such advanced aircraft as the Eurofighter or AWACs reconnaissance planes.

The only times the quiet is disturbed is when aviation engines – some of the most powerful in the world – are tested, or when aircraft land for maintenance or troubleshooting, or for conveying and picking up aerospace systems and components.

### Contact Aerospace | Satellite Navigation

Ursula Sieh

[ursula.sieh@invest-in-bavaria.com](mailto:ursula.sieh@invest-in-bavaria.com)

+ 49 89 2162-2388

## Apple's hot app



MobileButler is the best-selling app (application) in central Europe for Apple's iPhone – and the second best-selling one of all time worldwide.

That's quite a statement, considering that the iPhone is the lead member in the world's best-selling family of advanced communication devices – 37 million units. This family's popularity explains why Apple's AppStore offered, as of July 2009, 50,000 applications for the family. These apps have by now been downloaded one and a half billion times.

MobileButler reports on your telephone costs. It is the brainchild of Holger Frank, a Munich-based programmer, who has parlayed his app's success into a fast-

rising career as an IT entrepreneur.

Entwicklungsschmiede, Frank's recently-founded and Munich-headquartered company, leverages his expertise in designing, developing and troubleshooting applications into commissioned services for the iPhone, Android/Google and Java worlds.

## Contact ICT

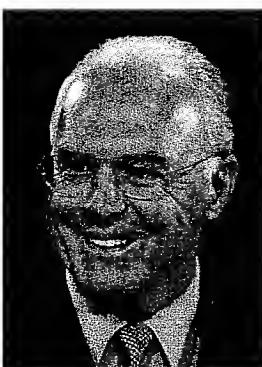
Regine Hutterer

[regine.hutterer@invest-in-bavaria.com](mailto:regine.hutterer@invest-in-bavaria.com)

+ 49 89 24210-750B

## Makers of modern Bavaria

### Franz Beckenbauer: football great



Great beer and great football.

Say 'Bavaria' and that's what comes to mind in many parts of the world.

The great beer is a product of thousands of brewers adhering over the last 50 generations to the highest standards of quality.

The great football is largely associated with one person: Franz Beckenbauer, who has been repeatedly voted Europe's greatest football player of all time.

This ranking is the product of Beckenbauer's sheer incredible achievements.

Beckenbauer was the driving force of the mid-70's FC Bayern München team which won three European club championships in a row.

Beckenbauer and his FC Bayern teammates—among them Gerd Müller, Sepp Maier and Paul Breitner—formed the nucleus of the German national team which won football's World Cup in 1974 and European Cup in 1980.

Beckenbauer went on to win another World Cup—in 1990, as coach of the German national team.

He capped his remarkable career by presiding over Germany's successful push to be the host of 2006's World Championships.

All told, Beckenbauer won 17 championships as a player and as a coach.

### Just a guy from Giesing

Giesing is where the working poor live in Munich. Beckenbauer was born in this gritty neighborhood in 1945. He spent his childhood playing sandlot football.

In 1958, happenstance caused him to sign up with FC Bayern München – a minor league team in those days.



By 1965, thanks largely to Beckenbauer, Bayern had ascended to the Bundesliga. The team won the Germany's Club Cup in the same year. Two years later, FC Bayern nabbed its first European championship. In 1969, the team won its first of what is now 21 Bundesliga championships.

### Key figure

**Number one.** Bavaria ranks first in Germany in safety. Bavaria has the lowest rate of criminality among the country's 16 states – and the highest rate of cases being solved. Safest city in the country is, not surprisingly, Munich!

[www.bka.de/pks/](http://www.bka.de/pks/)

## Places to know, places to go in Bavaria The coolest neighborhoods in Bavaria's cool cities:

### Munich!

Nymphenburg, Gern, Bogenhausen, Harlaching and Solln are sumptuously elegant. Schwabing, Neuhausen and Haidhausen are surpassingly pretty and artsy. Maxvorstadt and the Au are picturesque and replete with young creatives.



Hub of the Glockenbachviertel is Gärtnerplatz. This 'square' (it's actually round) is the place to see and be seen in the quarter.

### Nuremberg! Handwerkerhof Nürnberg

Nuremberg lives in the past.



sure whose centerpiece is one of the city wall's fortified towers, this 'craftsmen's yard' is home to 17 stalls and shops selling (and often producing on the spot) everything from miniature toys and glass figures to Lebkuchen (the ginger snaps so popular at Yuletide) and leather wares.

[www.handwerkerhof.de](http://www.handwerkerhof.de)

But the most vibrant neighborhood in Munich is the Glockenbachviertel. Named after the brook of the same name and located on the west bank of the Isar river, the quarter is replete with the clubs, bistros, charming stores and all the other essentials of an in-area – including a street life worthy of Berlin and San Francisco.

### Augsburg!

#### Maximilianstraße



Make your money by trading around the world, spend it on an imposing 'palace' (actually mansion) in the Maxstraße.

That practice was followed by Augsburg's commercial dynasties – among the Fuggers and Schäzlers – during the past seven centuries.

The practice made the Maximilianstraße (to give its full name) one of Europe's great avenues of architectural affluence.

Now resident in these Gothic, Renaissance, Baroque, Rococo and Neoclassical manses are restaurants, clubs, galleries, boutique and galleries.

They attract swarms of art-lovers and partygoers to the Maxstraße and its squares and their fountains.

At least as far as its millions of tourists are concerned. They flock to buy the traditionally-prepared foods and wares offered by the city's Christmas market, whose medieval look and feel makes it the biggest wintertime hit in the world.

These offerings are available all year round at the city's Handwerkerhof. Located in an enclo-

## Bavaria goes abroad: trade fairs and business trips

Bayern International, Bavaria's international business development arm, is facilitating the following trips in 2009.

Delegations headed by Martin Zeil (Bavaria's economics minister) or by Katja Hessel (state secretary)

### Business trips:

**South Africa**  
**MedFood Tech 2009**  
 food processing  
 October 4 - 8, 2009

**Romania**  
**2009**  
 wood industry  
 October 5 - 9, 2009

### Delegations:

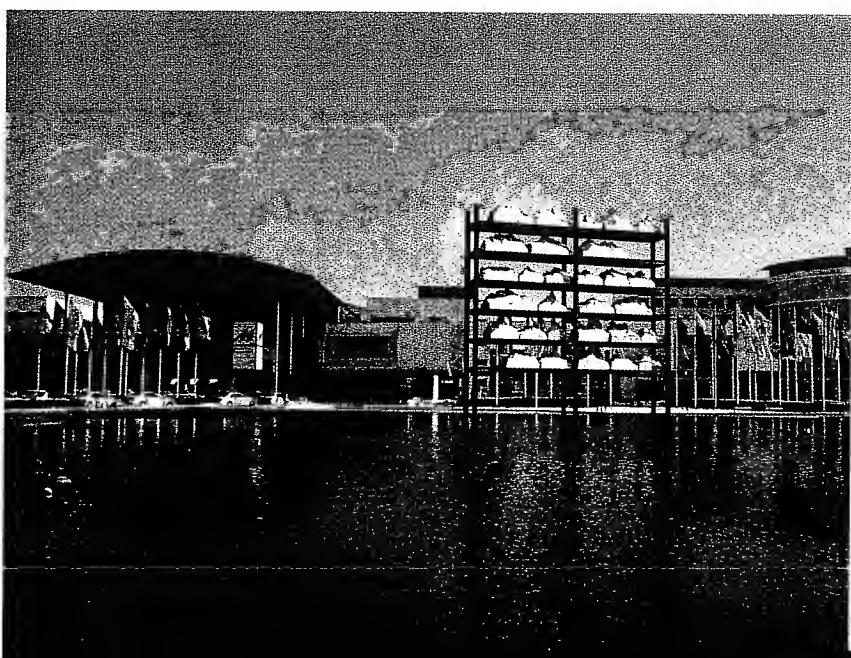
**Cuba and Columbia**  
 November 1 - 8, 2009

**Poland (Cracow, Lodz, Poznan)**  
 November 25 - 27, 2009



### For further information:

Bayern International  
 Ms. Agnieszka Eckert  
 aeckert@bayern-international.de  
 www.bayern-international.de  
 +49 89 660 566-301



## At your service

### Trade fairs in Bavaria

**October 1 – December 31st, 2009**

### Trade fairs in Munich:

#### Productronica

Manufacturing technologies for the electronics sector  
 November 10 – 13, 2009  
[www.productronica.com](http://www.productronica.com)

#### Ceramitec

Systems and supplies for the ceramics and powder metallurgy industry  
 October 20 – 23, 2009  
[www.ceramitec.com](http://www.ceramitec.com)

#### eCar Tec 2009

E-mobility  
 October 13 – 15, 2009  
[www.ecartec.de](http://www.ecartec.de)

#### EXPO REAL

12th International Commercial Property Exposition  
 October 5 – 7, 2009  
[www.exposereal.net](http://www.exposereal.net)

### Trade fairs in Nuremberg:

#### SPS/IPC/Drives

Systems and components for the automation of electronics  
 November 24 – 26, 2009



Invest

in Bavaria



## Your key to our state

### Invest in Bavaria at Bayern International GmbH

provides investors with the information and services needed to get them going to and growing in our state.

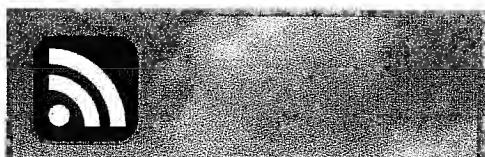
[www.invest-in-bavaria.com](http://www.invest-in-bavaria.com)  
info@invest-in-bavaria.com

### Press and public relations

Dr. Johann Niggl  
Widenmayerstr. 34  
80538 Munich  
Tel.: +49 89 24210-7501  
Fax. +49 89 24210-7557

### BusinessBavaria

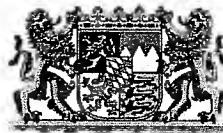
Editor-in-Chief: Markus Hautmann  
Senior Journalist: Terry Swartzberg  
Technical realization: Konrad Bayer



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**State of Bavaria United States Office /  
West Coast Division**  
 388 Market Street, Suite 1050  
 San Francisco, CA 94111  
 Phone: +1 (415) 362-1001  
 Fax: +1 (415) 362-1030  
 E-mail: [sanfrancisco@bavaria.org](mailto:sanfrancisco@bavaria.org)  
 Internet: [www.bavaria-westcoast.com](http://www.bavaria-westcoast.com)



Invest
in Bavaria

January 25, 2010

## **Oktoberfest 2009: Invitation**

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We would like to invite you to the

### **5<sup>th</sup> Annual Oktoberfest Networking Reception**

organized in cooperation with Carrol, Burdick & Mc Donough LLP, GACC, and GABA.

Please join us for Bavarian food, beer and live music in the true tradition of the Munich Oktoberfest.

Thursday, October 8<sup>th</sup>, 2009, 5.30 pm to 7.30 pm

Carrol, Burdick & McDonough LLP  
 44 Montgomery, Suite 400  
 San Francisco, CA 94104

Your invitation is attached. Space is limited, please RSVP to Nichole Kohake at [nkohake@cbmlaw.com](mailto:nkohake@cbmlaw.com). The State of Bavaria team is looking forward to welcoming you!

2009 FEB - 1 PM 3:21  
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Best regards,

Lucie E. Merkle  
 Executive Director

This material is circulated by the Bavarian Ministry for Economic Affairs, Infrastructure, Transport and Technology Office for Economic Development on behalf of the State of Bavaria, Federal Republic of Germany. Additional Information is on file with the Department of Justice, Washington, D.C.

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Bavaria:

## „High Tech Mecca of Europe“

*The Englischer Garten park in the heart of Munich is world famous. Covering an area of more than 4 square kilometres it is even larger than New York's Central Park. Not so well known perhaps is that the Bavarian capital is also playing in the same league as New York City as a publishing centre. With an output of close to 15,000 new book titles each year, Munich ranks as the world's No 2 book publishing city, surpassed only by New York.*

**Y**et Bavaria's strength in media goes way beyond publishing. Printing machines and technology made by Würzburg-based König & Bauer, founded in 1817, are running at printers worldwide. From print to TV and radio broadcasting, television and film production to Internet, multimedia and innovative IT solutions: Bavaria is Germany's top media and IT location and a hub of international standing.

### Top Media Location Bavaria

More than a quarter of Germany's largest 100 media enterprises are based in Bavaria. Steady and dynamic growth and expansion in the industry is fuelled by a balanced mix of Big Players and small and medium-sized companies. Some 90 newspaper publishers guarantee a diverse print publication landscape in Bavaria with numerous regional and local publishers alongside major national and international players such as Hubert Burda Media, Süddeutscher Verlag with its flagship Süddeutsche Zeitung, Germany's largest quality broadsheet and Verlagsgruppe Passau, a leading operator in central and eastern Europe's newspaper markets.

### Broadcasting Capital Munich

Dynamics and huge diversity are the hallmark of the broadcasting industry in Bavaria, where more than a third of all German-licensed TV channels are based. Especially the Greater Munich area has proved a magnet for national and international operators. Munich enjoys an unparalleled concentration of leading players such as pubcaster Bayerischer Rundfunk, ProSiebenSat.1 Media, Germany's leading commercial broadcaster with its free-to-air channels Sat.1, ProSieben, Kabel1, n-tv and 9Live, the German TV operations of Disney, Turner Broadcasting Systems, GE

least – a great pool of creative talent paved the way for nationally and internationally acclaimed box office hits like "Wer früher stirbt ist länger tot" (Grave Decisions) or "Das Leben der Anderen" (The Lives of Others).

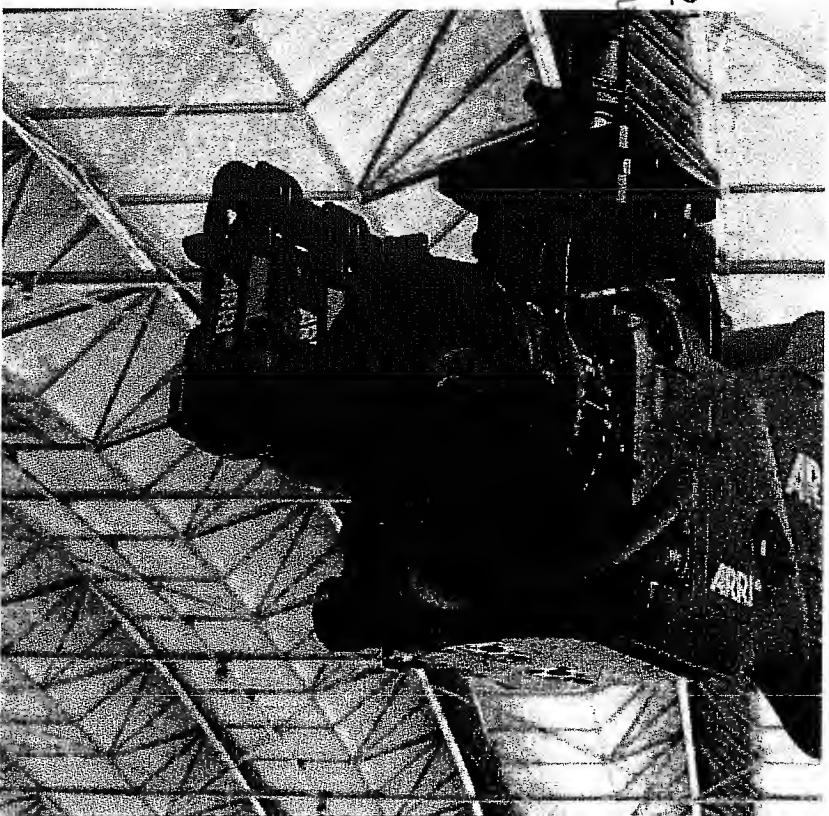
### Technology makes creativity work

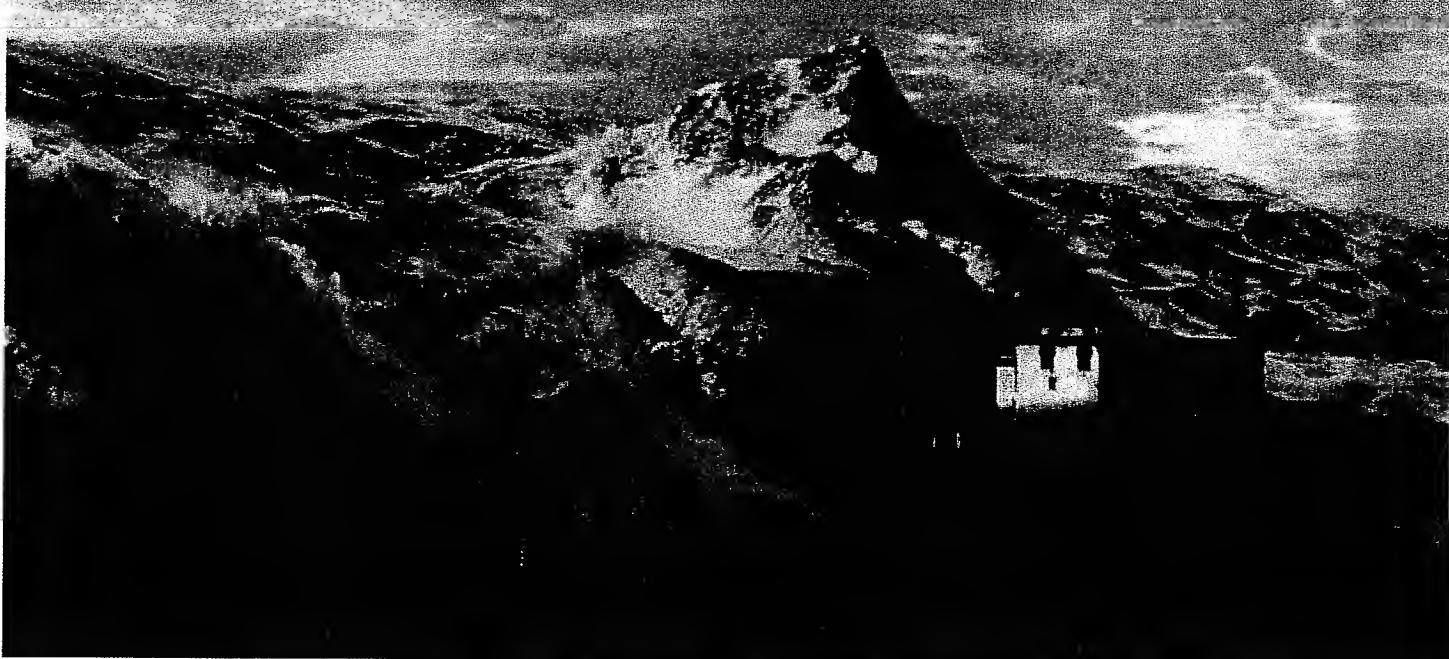
Film and television content not only requires creativity but also depends on innovative technology that enables the conversion of creative ideas into compelling images. Here again Bavaria has along tradition of path-breaking innovations and leading companies. Munich-based ARRI Group is a renowned developer and manufacturer of globally acclaimed professional film cameras, digital intermediate systems and lighting equipment. One of the company's flagship products, the 18,000-watt "Arrimax 18/12" lamphead which for instance helped illuminate the sets of blockbusters like "The Bourne Ultimatum" and "Mission Impossible III", won ARRI in 2009 its 14th Technical Oscar, not bad for a company established in 1917 by film pioneers August Arnold and Robert Richter in a former shoemaker's workshop.

### ICT and media convergence

Some six decades later a small garage in the United States became the cradle of one of the defining success stories of our ages that of Bill Gates and Microsoft. Bill Gates not

To be continued on page 17





*Climate change increasingly threatens the planet – yet this devastating flood is until now just a simulation by Munich-based Flowline. In Roland Emmerich's "2012" epic about a global cataclysm Flowline's technology was deployed to create giant waves inundating the Himalaya. This motion picture is a Sony Pictures/Columbia Pictures Production.*

long ago hailed Bavaria as "Europe's high-tech Mecca", no doubt buoyed by Microsoft's flourishing German operation, its largest facility in Europe, based – of course – in Bavaria at Unterschleißheim to the north of Munich. Bavaria's superb location credentials for ICT technology enterprises also attracted a host of other global players including Adobe, Alcatel Lucent, Intel, Oracle and Texas Instruments, not to mention native giants like Siemens, Infineon or Kathrein. Here they find key partners, suppliers and markets, not least the media sector. Digitalisation also breaks down the barriers and divisions between ICT and media. A case in point is digital animation, a fast growing area in Bavaria. The numerous top-class specialist enterprises in this field include Munich-based Flowline, the software development unit of renowned special effects specialist ScanlineVFX. Flowline's simulation technology for liquids was deployed in blockbusters like "Harry Potter and the Order of Phoenix" and won a Technical Oscar in 2008. ScanlineVFX has set up a branch in Los Angeles and has become a valued partner of Hollywood majors such as Warner Bros. and Paramount.

#### **Know How makes the difference**

Aside from sector-specific applications and solutions, Bavaria's IT industry shows particular strength in interface and enabling technologies like Embedded and Open Systems. Yet regardless of the specialisation, ICT enterprises in Bavaria all thrive on one common factor: the know-how and quality of their staff. They all benefit from one decisive

advantage Bavaria has to offer, namely its first-class education and training system and facilities. 11 universities and 17 universities of applied sciences ensure the availability of top-class talent and personnel throughout Bavaria. The state's universities and colleges produce some 4,000 graduates annually in IT-related course alone. In addition, Bavaria's famed quality of life and soft location factors attracts a host of first-rate specialists from further afield, nationally and internationally. This makes Bavaria an ideal base for research and development, as testified by major R&D units in the state by Olympus, GE and NTT DoCoMo.

#### **Tapping Bavaria's R&D network for growth**

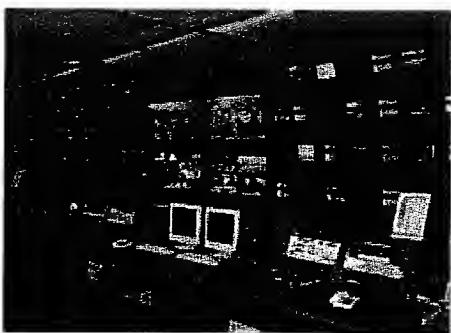
At the same time, businesses can profit from the exchange of ideas, know-how, technologies and support with a total of 23 first-rate research institutions. These include nine establishments of the Fraunhofer Society, three Helmholtz research facilities and eleven Max-Planck institutes that are at the forefront of the development of new technologies and services. Take the entertainment sector. It was the innovative spirit and ideas of scientists at the Nuremberg-based Fraunhofer IIS institute, a world leader in audio coding technologies, that resulted in the invention the MP3 audio compression technology that revolutionised the music industry and enabled us to store and listen to whole audio libraries on small devices anytime and anywhere on the go.

The excellent R&D environment also has convinced Google of Bavaria's merits. The

Internet giant in its inexorable march from search engine to multimedia conglomerate constantly surprises with new services and applications. These are based on intensive research work, some of which is also carried out in Bavaria, where Google operates its sole German development unit.

#### **...and the winner is: Gaming Awards**

The video games industry, not unlike Google, also illustrates the vast value added potential of digital convergence – the fusion of services, networks, platforms and content. This comparatively new industry has surpassed the movie sector and become one of the fastest growing and dominant media indus-



try segments worldwide, in parallel with the exponential advances in computer processing and network infrastructure. Again Bavaria has attracted a host of key players in the industry including Activision, Disney, Midway, Nintendo, Sega, Take 2, Vivendi Games and Koch Media, not to mention two of Germany's

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Your email: [sanfrancisco@bavaria.org](mailto:sanfrancisco@bavaria.org)

Company &  
Booth # State of Bavaria, booth # 14

Address: 388 Market Street, Suite 1050

City, State: San Francisco

Zip: 94111

Telephone: 415.362.1001

Website : [www.Invest-in-Bavaria.com](http://www.Invest-in-Bavaria.com)

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